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Amazon Web Services

SAA-C02



AWS Certified
Solutions Architect -
Associate (SAA-C02)

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Question #:1

A company is building a mobile app on AWS. The company wants to expand its reach to millions of users. The company needs to build a platform so that authorized users can watch the company's content on their mobile devices.

What should a solutions architect recommend to meet these requirements?

- A. Publish content to a public Amazon S3 bucket. Use AWS Key Management Service (AWS KMS) keys to stream content.
- B. Set up IPsec VPN between the mobile app and the AWS environment to stream content.
- C. Use Amazon CloudFront to provide signed URLs to stream content.
- D. Set up AWS Client VPN between the mobile app and the AWS environment to stream content.

Answer: C

Question #:2

A company is running a multi-tier web application on premises. The web application is containerized and runs on a number of Linux hosts connected to a PostgreSQL database that contains user records. The operational overhead of maintaining the infrastructure and capacity planning is limiting the company's growth. A solutions architect must improve the application's infrastructure.

Which combination of actions should the solutions architect take to accomplish this? (Select TWO.)

- A. Migrate the PostgreSQL database to Amazon Aurora.
- B. Migrate the web application to be hosted on Amazon EC2 instances.
- C. Set up an Amazon CloudFront distribution for the web application content.
- D. Set up Amazon ElastiCache between the web application and the PostgreSQL database.
- E. Migrate the web application to be hosted on AWS Fargate with Amazon Elastic Container Service (Amazon ECS).

Answer: C D

Question #:3

A company stores project information in a shared spreadsheet. The company wants to create a web application to replace the spreadsheet. The company has chosen Amazon DynamoDB to store the spreadsheet's data and is designing the web application to display the project information that is obtained from DynamoDB.

A solutions architect must design the web application's backend by using managed services that require minimal operational maintenance.

Which architectures meet these requirements? (Select TWO.)

- A. An Amazon API Gateway REST API accesses the project information that is in DynamoDB.
- B. An Elastic Load Balancer forwards requests to a target group with DynamoDB set up as the target.
- C. An Amazon API Gateway REST API invokes an AWS Lambda function. The Lambda function accesses DynamoDB.
- D. An Amazon Route 53 hosted zone routes requests to an AWS Lambda endpoint to invoke a Lambda function that accesses DynamoDB.
- E. An Elastic Load Balancer forwards requests to a target group of Amazon EC2 instances. The EC2 instances run an application that accesses DynamoDB.

Answer: A E

Question #:4

A development team needs to host a website that will be accessed by other teams. The website contents consist of HTML, CSS, client-side JavaScript, and images. Which method is the MOST cost-effective for hosting the website?

- A. Containerize the website and host it in AWS Fargate.
- B. Create an Amazon S3 bucket and host the website there.
- C. Deploy a web server on an Amazon EC2 instance to host the website.
- D. Configure an Application Load Balancer with an AWS Lambda target that uses the Express.js framework.

Answer: B

Question #:5

What should a solutions architect do to ensure that all objects uploaded to an Amazon S3 bucket are encrypted?

- A. Update the bucket policy to deny if the PutObject does not have an s3 x-amz-acl header set.
- B. Update the bucket policy to deny if the PutObject does not have an s3:x-amz-acl header set to private.
- C. Update the bucket policy to deny if the PutObject does not have an aws SecureTransport header set to true.

- D. Update the bucket policy to deny if the PutObject does not have an x-amz-server-side-encryption header set.

Answer: D

Question #:6

An application runs on Amazon EC2 instances across multiple Availability Zones. The instances run in an Amazon EC2 Auto Scaling group behind an Application Load Balancer. The application performs best when the CPU utilization of the EC2 instances is at or near 40%.

What should a solutions architect do to maintain the desired performance across all instances in the group?

- A. Use a simple scaling policy to dynamically scale the Auto Scaling group
- B. Use a target tracking policy to dynamically scale the Auto Scaling group
- C. Use an AWS Lambda function to update the desired Auto Scaling group capacity.
- D. Use scheduled scaling actions to scale up and scale down the Auto Scaling group

Answer: B

Question #:7

A company is planning to migrate a TCP-based application into the company's VPC. The application is publicly accessible on a nonstandard TCP port through a hardware appliance in the company's data centre. This public endpoint can process up to 3 million requests per second with low latency. The company requires the same level of performance for the new public endpoint in AWS.

What should a solutions architect recommend to meet this requirement?

- A. Deploy a Network Load Balancer (NLB). Configure the NLB to be publicly accessible over the TCP port that the application requires.
- B. Deploy an Application Load Balancer (ALB). Configure the ALB to be publicly accessible over the TCP port that the application requires.
- C. Deploy an Amazon CloudFront distribution that listens on the TCP port that the application requires. Use an Application Load Balancer as the origin.
- D. Deploy an Amazon API Gateway API that is configured with the TCP port that the application requires. Configure AWS Lambda functions with provisioned concurrency to process the requests.

Answer: A

Question #:8

A medical records company is hosting an application on Amazon EC2 instances. The application processes customer data files that are stored on Amazon S3. The EC2 instances are hosted in public subnets. The EC2 instances access Amazon S3 over the internet, but they do not require any other network access.

A new requirement mandates that the network traffic for file transfers take a private route and not be sent over the internet.

Which change to the network architecture should a solutions architect recommend to meet this requirement?"

- A. Create a NAT gateway. Configure the route table for the public subnets to send traffic to Amazon S3 through the NAT gateway.
- B. Configure the security group for the EC2 instances to restrict outbound traffic so that only traffic to the S3 prefix list is permitted.
- C. Move the EC2 instances to private subnets. Create a VPC endpoint for Amazon S3, and link the endpoint to the route table for the private subnets
- D. Remove the internet gateway from the VPC. Set up an AWS Direct Connect connection, and route traffic to Amazon S3 over the Direct Connect connection.

Answer: C

Question #:9

A company is designing a new web service that will run on Amazon EC2 instances behind an Elastic Load Balancer. However, many of the web service clients can only reach IP addresses whitelisted on their firewalls.

What should a solutions architect recommend to meet the clients' needs?

- A. A Network Load Balancer with an associated Elastic IP address
- B. An Application Load Balancer with an associated Elastic IP address
- C. An A record in an Amazon Route 53 hosted zone pointing to an Elastic IP address
- D. An EC2 instance with a public IP address running as a proxy in front of the load balancer

Answer: A

Question #:10

A company hosts its multi-tier, public web application in the AWS Cloud. The web application runs on Amazon EC2 instances and its database runs on Amazon RDS. The company is anticipating a large increase in

sales during an upcoming holiday weekend A solutions architect needs to build a solution to analyze the performance of the web application with a granularity of no more than 2 minutes.

What should the solutions architect do to meet this requirement?

- A. Send Amazon CloudWatch logs to Amazon Redshift Use Amazon QuickSight to perform further analysis
- B. Enable detailed monitoring on all EC2 instances. Use Amazon CloudWatch metrics to perform further analysis.
- C. Create an AWS Lambda function to fetch EC2 logs from Amazon CloudWatch Logs. Use Amazon CloudWatch metrics to perform further analysis
- D. Send EC2 logs to Amazon S3. Use Amazon Redshift to fetch logs from the S3 bucket to process raw data for further analysis with Amazon QuickSight

Answer: B

Question #:11

A company maintains about 300 TB in Amazon S3 Standard storage month after month The S3 objects are each typically around 50 GB in size and are frequently replaced with multipart uploads by their global application The number and size of S3 objects remain constant but the company's S3 storage costs are increasing each month

How should a solutions architect reduce costs in this situation?

- A. Switch from multipart uploads to Amazon S3 Transfer Acceleration
- B. Enable an S3 Lifecycle policy that deletes incomplete multipart uploads
- C. Configure S3 inventory to prevent objects from being archived too quickly
- D. Configure Amazon CloudFront to reduce the number of objects stored in Amazon S3

Answer: B

Question #:12

A company has 150 TB of archived image data stored on-premises that needs to be moved to the AWS Cloud within the next month. The company's current network connection allows up to 100 Mbps uploads for this purpose during the night only.

What is the MOST cost-effective mechanism to move this data and meet the migration deadline?

- A. Use AWS Snowmobile to ship the data to AWS.

- B. Order multiple AWS Snowball devices to ship the data to AWS.
- C. Enable Amazon S3 Transfer Acceleration and securely upload the data.
- D. Create an Amazon S3 VPC endpoint and establish a VPN to upload the data

Answer: B

Question #:13

An ecommerce company is running a multi-tier application on AWS. The front-end and backend tiers run on Amazon EC2, and the database runs on Amazon RDS for MySQL. The backend tier communicates with the RDS instance. There are frequent calls to return identical database from the database that are causing performance slowdowns.

Which action should be taken to improve the performance of the backend?

- A. Implement Amazon SNS to store the database calls.
- B. Implement Amazon ElastiCache to cache the large database.
- C. Implement an RDS for MySQL read replica to cache database calls.
- D. Implement Amazon Kinesis Data Firehose to stream the calls to the database.

Answer: B

Question #:14

An application runs on Amazon EC2 instances across multiple Availability Zones. The instances run in an Amazon EC2 Auto Scaling group behind an Application Load Balancer. The application performs best when the CPU utilization of the EC2 instances is at or near 40%.

What should a solutions architect do to maintain the desired performance across all instances in the group?

- A. Use a simple scaling policy to dynam
- B. Amazon DynamoDB global tables
- C. Amazon RDS for MySQL with Multi-AZ enabled
- D. Amazon RDS for MySQL with a cross-Region snapshot copy

Answer: A

Question #:15

A company is migrating a NoSQL database cluster to Amazon EC2. The database automatically replicates

data to maintain at least three copies of the data I/O throughput of the servers is the highest priority.

Which instance type should a solutions architect recommend for the migration?

- A. Storage optimized instances with instance store
- B. Burstable general purpose instances with an Amazon Elastic Block Store (Amazon EBS) volume
- C. Memory optimized instances with Amazon Elastic Block Store (Amazon EBS) optimization enabled
- D. Compute optimized instances with Amazon Elastic Block Store (Amazon EBS) optimization enabled

Answer: A

Question #:16

A company is designing a new application that runs in a VPC on Amazon EC2 instances. The application stores data in Amazon S3 and uses Amazon DynamoDB as its database. For compliance reasons, the company prohibits all traffic between the EC2 instances and other AWS services from passing over the public internet.

What can a solutions architect do to meet this requirement?

- A. Configure gateway VPC endpoints to Amazon S3 and DynamoDB
- B. Configure interface VPC endpoints to Amazon S3 and DynamoDB
- C. Configure a gateway VPC endpoint to Amazon S3. Configure an interface VPC endpoint to DynamoDB.
- D. Configure a gateway VPC endpoint to DynamoDB. Configure an interface VPC endpoint to Amazon S3

Answer: A

Question #:17

A manufacturing company has machine sensors that upload CSV files to an Amazon S3 bucket. These CSV files must be converted into images and must be made available as soon as possible for the automatic generation of graphical reports.

The images become irrelevant after 1 month, but the CSV files must be kept to train machine learning (ML) models twice a year. The ML trainings and audits are planned weeks in advance.

Which combination of steps will meet these requirements MOST cost-effectively? (Select TWO)

- A. Launch an Amazon EC2 Spot Instance that downloads the .CSV files every hour, generates the image files, and uploads the images to the S3 bucket.
- B. Design an AWS Lambda function that converts the .CSV files into images and stores the images in the S3

bucket Invoke the Lambda function when a csv file is uploaded.

- C. Create S3 Lifecycle rules for .csv files and image files in the S3 bucket Transition the csv files from S3 Standard to S3 Glacier 1 day after they are uploaded. Expire the image files after 30 days.
- D. Create S3 Lifecycle rules for csv files and image files in the S3 bucket Transition the csv files from S3 Standard to S3 One Zone-Infrequent Access (S3 One Zone-IA) 1 day after they are uploaded Expire the image files after 30 days
- E. Create S3 Lifecycle rules for .csv files and image files in the S3 bucket. Transition the csv files from S3 Standard to S3 Standard-Infrequent Access (S3 Standard-IA) 1 day after they are uploaded. Keep the image files in Reduced Redundancy Storage (RRS).

Answer: B D

Question #:18

A company has an on-premises data center that is running out of storage capacity. The company wants to migrate its storage infrastructure to AWS while minimizing bandwidth costs. The solution must allow for immediate retrieval of data at no additional cost.

How can these requirements be met?

- A. Deploy Amazon S3 Glacier Vault and enable expedited Enable provisioned retrieved capacity for the workload.
- B. Deploy AWS Storage Gateway using cached volumes. Use Storage GATEWAY store data in Amazon retaining copies of frequently accessed data subnets locally.
- C. Deploy AWS Storage gateway using stored volume to store data locally Use Storage gateway asynchronously back up point-in-time snapshots of the data Amazon S3.
- D. Deploy AWS Direct Connects to connect with on-premises data center. Configure AWS Storage gateway to store data locally use storage gateway to asynchronously back up point-in-time snapshot of data Amazon S3.

Answer: C

Question #:19

A company currently has 250 TB of backup files stored in Amazon S3 in a vendor's proprietary format. Using a Linux-based software application provided by the vendor, the company wants to retrieve files from Amazon S3, transform the files to an industry-standard format, and re-upload them to Amazon S3. The company wants to minimize the data transfer charges associated with this conversion

What should a solutions architect do to accomplish this?

- A. Install the conversion software as an Amazon S3 batch operation so the data is transformed without

leaving Amazon S3

- B. Install the conversion software onto an on-premises virtual machine. Perform the transformation and re-upload the files to Amazon S3 from the virtual machine.
- C. Use AWS Snowball Edge devices to export the data and install the conversion software onto the devices. Perform the data transformation and re-upload the files to Amazon S3 from the Snowball Edge devices
- D. Launch an Amazon EC2 instance in the same Region as Amazon S3 and install the conversion software onto the instance. Perform the transformation and re-upload the files to Amazon S3 from the EC2 instance.

Answer: D

Question #:20

A healthcare computer stores highly sensitive records. Compliance requires that multiple copies be stored in different locations. Each record must be stored for 7 years. The company has a service level agreement (SLA) to provide records to government agencies immediately for the first 30 days and then within 4 hours of a request thereafter.

What should a solutions architect recommend?

- A. Use Amazon S3 with cross-Region replication enabled. After 30 days. Transition the data to Amazon S3 Glacier using lifecycle policy.
- B. Use Amazon S3 with cross-origin resource sharing (CCRS) enabled. After 30 days. Transition on the data to Amazon S3 Glacier using a lifecycle policy.
- C. Use Amazon S3 with cross-origin replication enabled. After 30 days, transition the data to Amazon S3 Glacier Deep Archive a lifecycle policy.
- D. Use Amazon S3 with cross-origin resource sharing (CCRS) enabled. After 30 days, transition on the data to Amazon S3 Glacier Deep Archive using a lifecycle policy.

Answer: A

Question #:21

A company wants to provide users with access to AWS resources. The company has 1,500 users and manages their access to on-premises resources through Active Directory user groups on the corporate network. However, the company does not want users to have to maintain another identity to access the resources. A solutions architect must manage user access to the AWS resources while preserving access to the on-premises resources.

What should the solutions architect do to meet these requirements?

- A. Create an IAM user for each user in the company. Attach the appropriate policies to each user.

- B. Use Amazon Cognito with an Active Directory user pool Create roles with the appropriate policies attached
- C. Define cross-account roles with the appropriate policies attached Map the roles to the Active Directory groups
- D. Configure Security Assertion Markup Language (SAML) 2.0-based federation Create roles with the appropriate policies attached Map the roles to the Active Directory groups

Answer: D

Question #:22

A company is using AWS Key Management Service (AWS KMS) customer master keys (CMKs) to encrypt AWS Lambda environment variables. A solutions architect needs to ensure that the required permissions are in place to decrypt and use the environment variables.

Which steps must the solutions architect take to implement the correct permissions? (Select TWO.)

- A. Add AWS KMS permissions in the Lambda resource policy
- B. Add AWS KMS permissions in the Lambda execution role
- C. Add AWS KMS permissions in the Lambda function policy.
- D. Allow the Lambda execution role in the AWS KMS key policy
- E. Allow the Lambda resource policy in the AWS KMS key policy.

Answer: B C

Question #:23

A company's facility has badge readers at every entrance throughout the building. When badges are scanned, the readers send a message over HTTPS to indicate who attempted to access that particular entrance.

A solutions architect must design a system to process these messages from the sensors. The solution must be highly available, and the results must be made available for the company's security team to analyze.

Which system architecture should the solutions architect recommend?

- A. Launch an Amazon EC2 instance to serve as the HTTPS endpoint and to process the messages. Configure the EC2 instance to save the results to an Amazon S3 bucket.
- B. Create an HTTPS endpoint in Amazon API Gateway. Configure the API Gateway endpoint to invoke an AWS Lambda function to process the messages and save the results to an Amazon DynamoDB table.

- C. Use Amazon Route 53 to direct incoming sensor messages to an AWS Lambda function. Configure the Lambda function to process the messages and save the results to an Amazon DynamoDB table.
- D. Create a gateway VPC endpoint for Amazon S3. Configure a Site-to-Site VPN connection from the facility network to the VPC so that sensor data can be written directly to an S3 bucket by way of the VPC endpoint

Answer: B

Question #:24

A company's security team requests that network traffic be captured in VPC Flow Logs. The logs will be frequently accessed for 90 days and then accessed intermittently. What should a solutions architect do to meet these requirements when configuring the logs?

- A. Use Amazon CloudWatch as the target. Set the CloudWatch log group with an expiration of 90 days.
- B. Use Amazon Kinesis as the target. Configure the Kinesis stream to always retain the logs for 90 days.
- C. Use AWS CloudTrail as the target. Configure CloudTrail to save to an Amazon S3 bucket, and enable S3 Intelligent-Tiering.
- D. Use Amazon S3 as the target. Enable an S3 Lifecycle policy to transition the logs to S3 Standard-Infrequent Access (S3 Standard-IA) after 90 days.

Answer: D

Question #:25

A solutions architect must transfer 750 TB of data from an on-premises network-attached file system to Amazon S3 Glacier. The migration must not saturate the on-premises 10 Mbps internet connection.

Which solution will meet these requirements?

- A. Create an AWS Site-to-Site VPN tunnel to an S3 bucket. Transfer the files directly by using the AWS CLI.
- B. Order 10 AWS Snowball Edge Storage Optimized devices, and select an S3 Glacier vault as the destination.
- C. Mount the network-attached file system to an S3 bucket, and copy the files directly. Create an S3 Lifecycle policy to transition the S3 objects to S3 Glacier.
- D. Order 10 AWS Snowball Edge Storage Optimized devices, and select an S3 bucket as the destination. Create an S3 Lifecycle policy to transition the S3 objects to S3 Glacier.

Answer: D

Question #:26

Application developers have noticed that a production application is very slow when business reporting users run large production reports against the Amazon RDS instance backing the application. The CPU and memory utilization metrics for the RDS instance do not exceed 60% while the reporting queries are running. The business reporting users must be able to generate reports without affecting the application's performance.

Which action will accomplish this?

- A. Increase the size of the RDS instance
- B. Create a read replica and connect the application to it
- C. Enable multiple Availability Zones on the RDS instance
- D. Create a read replica and connect the business reports to it

Answer: D

Question #:27

A company plans to store sensitive user data on Amazon S3. Internal security compliance requirements mandate encryption of data before secured it to Amazon S3.

What should a solutions architect recommend to safely these requirements?

- A. Server-side encryption with customer-provided encryption keys.
- B. Client-side encryption with Amazon S3 managed encryption keys.
- C. Service-side encryption with keys stored in AWS Management Service (AWS KMS)
- D. Server-side encryption with a master stored in AWS Management Service (AWS KMS)

Answer: D

Question #:28

A company has an image processing workload running on Amazon Elastic Container Service (Amazon ECS) in two private subnets. Each private subnet uses a NAT instance for Internet access. All images are stored in Amazon S3 buckets. The company is concerned about the data transfer costs between Amazon ECS and Amazon S3.

What should a solutions architect do to reduce costs?

- A. Configure a NAT gateway to replace the NAT instances

- B. Configure a gateway endpoint for traffic destined to Amazon S3
- C. Configure an interface endpoint for traffic destined to Amazon S3
- D. Configure Amazon CloudFront for the S3 bucket storing the images

Answer: C

Question #:29

A company needs a storage solution for an application that runs on a high performance computing (HPC) cluster. The cluster is hosted on AWS Fargate for Amazon Elastic Container Service (Amazon ECS) The company needs a mountable file system that provides concurrent access to files while delivering hundreds of GBps of throughput at sub-millisecond latencies

Which solution meets these requirements?

- A. Create an Amazon FSx for Lustre file share for the application data Create an IAM role that allows Fargate to access the FSx for Lustre file share
- B. Create an Amazon Elastic File System (Amazon EFS) file share for the application data. Create an IAM role that allows Fargate to access the EFS file share.
- C. Create an Amazon S3 bucket for the application data. Create an S3 bucket policy that allows Fargate to access the S3 bucket
- D. Create an Amazon Elastic Block Store (Amazon EBS) Provisioned IOPS SSD (io2) volume for the application data Create an IAM role that allows Fargate to access the volume.

Answer: A

Question #:30

A company wants to build an immutable infrastructure for its software applications The company wants to test the software applications before sending traffic to them The company seeks an efficient solution that limits the effects of application bugs

Which combination of steps should a solutions architect recommend? {Select TWO}

- A. Use AWS Cloud Formation to update the production infrastructure and roll back the stack if the update fails
- B. Apply Amazon Route 53 weighted routing to test the staging environment and gradually increase the traffic as the tests pass
- C. Apply Amazon Route 53 failover routing to test the staging environment and fail over to the production environment if the tests pass
- D. Use AWS Cloud Formation with a parameter set to the staging value in a separate environment other

than the production environment

- E. Use AWS Cloud Formation to deploy the staging environment with a snapshot deletion policy and reuse the resources in the production environment if the tests pass

Answer: A B

Question #:31

A company needs to implement a relational database with a multi-Region disaster recovery Recovery Point Objective (RPO) of 1 second and an Recovery Time Objective (RTO) of 1 minute

Which AWS solution can achieve this?

- A. Amazon Aurora Global Database
- B. Amazon DynamoDB global tables
- C. Amazon RDS for MySQL with Multi-AZ enabled
- D. Amazon RDS for MySQL with a cross-Region snapshot copy

Answer: A

Question #:32

A company has a mobile chat application with a data store based in Amazon DynamoDB. Users would like new messages to be need with as little latency as possible. A possible architect needs design an optimal solution that requires minimal application changes.

Which method should the solution architect select?

- A. Configure amazon DynamoDB Accelerator (DAX) for the new messages table. Update the code to use DAX endpoint.
- B. AddDynamoDB read replicas to handle the increased read lead the application to point to the read endpoint for the read replicas.
- C. Double the number of read capacity units for the new messages table in DynamoDB. Continue to use the existing DynamoDB endpoint.
- D. Add an Amazon ElastiCache for Redis cache to the application stack. Update the application to point to the Redis cache endpoint of DynamoDB.

Answer: A

Question #:33

A company has an ecommerce application that stores data in an on-premises SQL database. The company has decided to migrate this database to AWS. However, as part of the migration, the company wants to find a way to attain sub-millisecond responses to common read requests

A solutions architect knows that the increase in speed is paramount and that a small percentage of stale data returned in the database reads is acceptable.

What should the solutions architect recommend'?

- A. Build Amazon RDS read replicas.
- B. Build the database as a larger instance type.
- C. Build a database cache using Amazon ElastiCache
- D. Build a database cache using Amazon Elasticsearch Service (Amazon ES).

Answer: C

Question #:34

A company is migrating a large, mission-critical database to AWS. A solutions architect has decided to use an Amazon RDS for MySQL Multi-AZ DB instance that is deployed with 80,000 Provisioned IOPS for storage. The solutions architect is using AWS Database Migration Service (AWS DMS) to perform the data migration. The migration is taking longer than expected, and the company wants to speed up the process. The company's network team has ruled out bandwidth as a limiting factor.

Which actions should the solutions architect take to speed up the migration? (Select TWO.)

- A. Disable Multi-AZ on the target DB instance.
- B. Create a new DMS instance that has a larger instance size.
- C. Turn off logging on the target DB instance until the initial load is complete.
- D. Restart the DMS task on a new DMS instance with transfer acceleration enabled.
- E. Change the storage type on the target DB instance to Amazon Elastic Block Store (Amazon EBS) General Purpose SSD (gp2).

Answer: A D

Question #:35

A company is performing an AWS Well-Architected Framework review of an existing workload deployed on AWS. The review identified a public-facing website running on the same Amazon EC2 instance as a Microsoft Active Directory domain controller that was installed recently to support other AWS services. A solutions

architect needs to recommend a new design that would improve the security of the architecture and minimize the administrative demand on IT staff

What should the solutions architect recommend?

- A. Use AWS Directory Service to create a managed Active Directory Uninstall Active Directory on the current EC2 instance
- B. Create another EC2 instance in the same subnet and reinstall Active Directory on it Uninstall Active Directory on the current EC2 instance
- C. Use AWS Directory Service to create an Active Directory connector Proxy Active Directory requests to the Active Directory domain controller running on the current EC2 instance
- D. Enable AWS Single Sign-On (AWS SSO) with Security Assertion Markup Language (SAML) 2.0 federation with the current Active Directory controller Modify the EC2 instance's security group to deny public access to Active Directory

Answer: A

Question #:36

A solutions architect is designing a multi-tier application for a company. The application's users upload images from a mobile device. The application generates a thumbnail of each image and returns a message to the user to confirm that the image was uploaded successfully.

The thumbnail generation can take up to 60 seconds, but the company wants to provide a faster response time to its users to notify them that the original image was received. The solutions architect must design the application to asynchronously dispatch requests to the different application tiers.

What should the solutions architect do to meet these requirements?

- A. Write a custom AWS Lambda function to generate the thumbnail and alert the user. Use the image upload process as an event source to invoke the Lambda function.
- B. Create an AWS Step Functions workflow. Configure Step Functions to handle the orchestration between the application tiers and alert the user when thumbnail generation is complete.
- C. Create an Amazon Simple Queue Service (Amazon SQS) message queue. As images are uploaded, place a message on the SQS queue for thumbnail generation. Alert the user through an application message that the image was received.
- D. Create Amazon Simple Notification Service (Amazon SNS) notification topics and subscriptions. Use one subscription with the application to generate the thumbnail after the image upload is complete. Use a second subscription to message the user's mobile app by way of a push notification after thumbnail generation is complete.

Answer: A

Question #37

A weather forecasting company needs to process hundreds of gigabytes of data with sub-mill (second) latency. The company has a high performance computing (HPC) environment in its data center and wants to expand its forecasting capabilities

A solutions architect must identify a highly available cloud storage solution that can handle large amounts of sustained throughput. Files that are stored in the solution should be accessible to thousands of compute instances that will simultaneously access and process the entire dataset

What should the solutions architect do to meet these requirements?

- A. Use Amazon FSx for Lustre scratch file systems.
- B. Use Amazon FSx for Lustre persistent file systems
- C. Use Amazon Elastic File System (Amazon EFS) with Bursting Throughput mode
- D. Use Amazon Elastic File System (Amazon EFS) with Provisioned Throughput mode

Answer: B

Question #38

An Amazon EC2 administrator created the following policy associated with an IAM group containing several users

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "ec2:TerminateInstances",
      "Resource": "*",
      "Condition": {
        "IpAddress": {
          "aws:SourceIp": "10.100.100.0/24"
        }
      }
    },
    {
      "Effect": "Deny",
      "Action": "ec2:*",
      "Resource": "*",
      "Condition": {
        "StringNotEquals": {
          "ec2:Region": "us-east-1"
        }
      }
    }
  ]
}
```

What is the effect of this policy?

- A. Users can terminate an EC2 instance in any AWS Region except us-east-1.
- B. Users can terminate an EC2 instance with the IP address 10 100 100 1 in the us-east-1 Region
- C. Users can terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254.
- D. Users cannot terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100 100 254

Answer: A

Question #:39

A company wants to host a web application on AWS that will communicate to a database within a VPC. The application should be highly available.

What should a solutions architect recommend?

- A. Create two Amazon EC2 instances to host the web servers behind a load balancer and then deploy the database on a large instance
- B. Deploy a load balancer in multiple Availability Zones with an Auto Scaling group for the web servers and then deploy Amazon RDS in multiple Availability Zones
- C. Deploy a load balancer in the public subnet with an Auto Scaling group for the web servers, and then deploy the database on an Amazon EC2 instance in the private subnet
- D. Deploy two web servers with an Auto Scaling group, configure a domain that points to the two web servers, and then deploy a database architecture in multiple Availability Zones

Answer: B

Question #:40

A solutions architect plans to convert a company's monolithic web application into a multi-tier application. The company wants to avoid managing its own infrastructure. The minimum requirements for the web application are high availability, scalability, and regional low latency during peak hours. The solution should also store and retrieve data with millisecond latency using the application's API.

Which solution meets these requirements?

- A. Use AWS Fargate to host the web application with backend Amazon RDS Multi-AZ DB instances
- B. Use Amazon API Gateway with an edge-optimized API endpoint, AWS Lambda for compute, and Amazon DynamoDB as the data store
- C. Use an Amazon Route 53 routing policy with geolocation that points to an Amazon S3 bucket with static website hosting and Amazon DynamoDB as the data store
- D. Use an Amazon CloudFront distribution that points to an Elastic Load Balancer with an Amazon EC2 Auto Scaling group, along with Amazon RDS Multi-AZ DB instances

Answer: C

Question #:41

An ecommerce company hosts its analytics application in the AWS Cloud. The application generates about 300 MB of data each month. The data is stored in JSON format. The company is evaluating a disaster recovery solution to back up the data. The data must be accessible in milliseconds if it is needed, and the data must be kept for 30 days.

Which solution meets these requirements MOST cost-effectively?

- A. Amazon Elasticsearch Service (Amazon ES)

- B. Amazon S3 Glacier
- C. Amazon S3 Standard
- D. Amazon RDS for PostgreSQL

Answer: A

Question #:42

A company captures ordered clickstream data from multiple websites and uses batch processing to analyze the data. The company receives 100 million event records, all approximately 1 KB in size, each day. The company loads the data into Amazon Redshift each night, and business analysts consume the data.

The company wants to move toward near-real-time data processing for timely insights. The solution should process the streaming data while requiring the least possible operational overhead.

Which combination of AWS services will meet these requirements MOST cost-effectively? (Select TWO.)

- A. Amazon EC2
- B. AWS Batch
- C. Amazon Simple Queue Service (Amazon SQS)
- D. Amazon Kinesis Data Firehose
- E. Amazon Kinesis Data Analytics

Answer: B C

Question #:43

A company has recently updated its internal security standards. The company must now ensure all Amazon S3 buckets and Amazon Elastic Block Store (Amazon EBS) volumes are encrypted with keys created and periodically rotated by internal security specialists. The company is looking for a native, software-based AWS service to accomplish this goal.

What should a solutions architect recommend as a solution?

- A. Use AWS Secrets Manager with customer master keys (CMKs) to store master key material and apply a routine to create a new CMK periodically and replace it in AWS Secrets Manager.
- B. Use AWS Key Management Service (AWS KMS) with customer master keys (CMKs) to store master key material and apply a routine to re-create a new key periodically and replace it in AWS KMS.
- C. Use an AWS CloudHSM cluster with customer master keys (CMKs) to store master key material and apply a routine to re-create a new key periodically and replace it in the CloudHSM cluster nodes.

- D. Use AWS Systems Manager Parameter Store with customer master keys (CMKs) to store master key material and apply a routine to re-create a new key periodically and replace it in the Parameter Store

Answer: B

Question #:44

A company hosts historical weather records in Amazon S3. The records are downloaded from the company's website by way of a URL that resolves to a domain name. Users all over the world access this content through subscriptions. A third-party provider hosts the company's root domain name, but the company recently migrated some of its services to Amazon Route 53. The company wants to consolidate contracts, reduce latency for users, and reduce costs related to serving the application to subscribers.

Which solution meets these requirements?

- A. Create a web distribution on Amazon CloudFront to serve the S3 content for the application. Create a CNAME record in a Route 53 hosted zone that points to the CloudFront distribution, resolving to the application's URL domain name.
- B. Create a web distribution on Amazon CloudFront to serve the S3 content for the application. Create an ALIAS record in the Amazon Route 53 hosted zone that points to the CloudFront distribution, resolving to the application's URL domain name.
- C. Create an A record in a Route 53 hosted zone for the application. Create a Route 53 traffic policy for the web application, and configure a geolocation rule. Configure health checks to check the health of the endpoint and route DNS queries to other endpoints if an endpoint is unhealthy.
- D. Create an A record in a Route 53 hosted zone for the application. Create a Route 53 traffic policy for the web application, and configure a geoproximity rule. Configure health checks to check the health of the endpoint and route DNS queries to other endpoints if an endpoint is unhealthy.

Answer: C

Question #:45

A company recently implemented hybrid cloud connectivity using AWS Direct Connect and is migrating data to Amazon S3. The company is looking for a fully managed solution that will automate and accelerate the replication of data between the on-premises storage systems and AWS storage services.

Which solution should a solutions architect recommend to keep the data private?

- A. Deploy an AWS DataSync agent for the on-premises environment. Configure a sync job to replicate the data and connect it with an AWS service endpoint.
- B. Deploy an AWS DataSync agent for the on-premises environment. Schedule a batch job to replicate point-in-time snapshots to AWS.

- C. Deploy an AWS Storage Gateway volume gateway for the on-premises environment. Configure it to store data locally, and asynchronously back up point-in-time snapshots to AWS.
- D. Deploy an AWS Storage Gateway file gateway for the on-premises environment. Configure it to store data locally, and asynchronously back up point-in-time snapshots to AWS.

Answer: A

Question #:46

A company's near-real-time streaming application is running on AWS. As the data is ingested, a job runs on the data and takes 30 minutes to complete. The workload frequently experiences high latency due to large amounts of incoming data. A solutions architect needs to design a scalable and serverless solution to enhance performance.

Which combination of steps should the solutions architect take? (Select TWO.)

- A. Use Amazon Kinesis Data Firehose to ingest the data.
- B. Use AWS Lambda with AWS Step Functions to process the data.
- C. Use AWS Database Migration Service (AWS DMS) to ingest the data.
- D. Use Amazon EC2 instances in an Auto Scaling group to process the data.
- E. Use AWS Fargate with Amazon Elastic Container Service (Amazon ECS) to process the data.

Answer: A E

Question #:47

A company operates a two-tier application for image processing. The application uses two Availability Zones, each with one public subnet and one private subnet. An Application Load Balancer (ALB) for the web tier uses the public subnets. Amazon EC2 instances for the application tier use the private subnets.

Users report that the application is running more slowly than expected. A security audit of the web server log files shows that the application is receiving millions of illegitimate requests from a small number of IP addresses. A solutions architect needs to resolve the immediate performance problem while the company investigates a more permanent solution.

What should the solutions architect recommend to meet this requirement?

- A. Modify the inbound security group for the web tier. Add a deny rule for the IP addresses that are consuming resources.
- B. Modify the network ACL for the web tier subnets. Add an inbound deny rule for the IP addresses that are consuming resources.

- C. Modify the inbound security group for the application tier. Add a deny rule for the IP addresses that are consuming resources.
- D. Modify the network ACL for the application tier subnets. Add an inbound deny rule for the IP addresses that are consuming resources.

Answer: B

Question #:48

A company's packaged application dynamically creates and returns single-use text files in response to user requests. The company is using Amazon CloudFront for distribution^ but wants to further reduce data transfer costs. The company cannot modify the application's source code.

What should a solutions architect do to reduce costs?

- A. Use Lambda@Edge to compress the files as they are sent to users.
- B. Enable Amazon S3 Transfer Acceleration to reduce the response times.
- C. Enable caching on the CloudFront distribution to store generated files at the edge.
- D. Use Amazon S3 multipart uploads to move the files to Amazon S3 before returning them to users.

Answer: C

Question #:49

A company has been running a web application with an Oracle relational database in an on-premises data center for the past 15 years. The company must migrate the database to AWS. The company needs to reduce operational overhead without having to modify the application's code.

Which solution meets these requirements?

- A. Use AWS Database Migration Service (AWS DMS) to migrate the database servers to Amazon RDS.
- B. servers.
- C. Use AWS Database Migration Service (AWS DMS) to migrate the database servers to Amazon DynamoDB.
- D. Use an AWS Snowball Edge Storage Optimized device to migrate the data from Oracle to Amazon Aurora.

Answer: A

Question #:50

A company processes large amounts of data. The output data is stored in Amazon S3 Standard storage in an S3 bucket, where it is analyzed for 1 month. The data must remain immediately accessible after the 1-month analysis period.

Which storage solution meets these requirements MOST cost-effectively?

- A. Configure an S3 Lifecycle policy to transition the objects to S3 Glacier after 30 days.
- B. Configure S3 Intelligent-Tiering to transition the objects to S3 Glacier after 30 days.
- C. Configure an S3 Lifecycle policy to transition the objects to S3 One Zone-Infrequent Access (S3 One Zone-IA) after 30 days.
- D. Configure an S3 Lifecycle policy to delete the objects after 30 days. Enable versioning on the S3 bucket so that deleted objects can still be immediately restored as needed.

Answer: B

Question #:51

A company recently started using Amazon Aurora as the data store for its global ecommerce application. When large reports are run, developers report that the ecommerce application is performing poorly. After reviewing metrics in Amazon CloudWatch, a solutions architect finds that the ReadIOPS and CPU Utilization metrics are spiking when monthly reports run.

What is the MOST cost-effective solution?

- A. Migrate the monthly reporting to Amazon Redshift.
- B. Migrate the monthly reporting to an Aurora Replica.
- C. Migrate the Aurora database to a larger instance class.
- D. Increase the Provisioned IOPS on the Aurora instance.

Answer: D

Question #:52

A company has two VPCs named Management and Production. The Management VPC uses VPNs through a customer gateway to connect to a single device in the data center. The Production VPC uses a virtual private gateway with two attached AWS Direct Connect connections. The Management and Production VPCs both use a single VPC peering connection to allow communication between the applications.

What should a solutions architect do to mitigate any single point of failure in this architecture?

- A. Add a set of VPNs between the Management and Production VPCs
- B. Add a second virtual private gateway and attach it to the Management VPC.
- C. Add a second set of VPNs to the Management VPC from a second customer gateway device
- D. Add a second VPC peering connection between the Management VPC and the Production VPC.

Answer: B

Question #:53

A company is developing a real-time multiplayer game that uses UDP for communications between the client and servers. In an Auto Scaling group, spikes in demand are anticipated during the day, so the game server platform must adapt accordingly. Developers want to store gamer scores and other non-relational data in a database solution that will scale without intervention.

Which solution should a solutions architect recommend?

- A. Use Amazon Route 53 for traffic distribution and Amazon Aurora Serverless for data storage
- B. Use a Network Load Balancer for traffic distribution and Amazon DynamoDB on-demand for data storage
- C. Use a Network Load Balancer for traffic distribution and Amazon Aurora Global Database for data storage
- D. Use an Application Load Balancer for traffic distribution and Amazon DynamoDB global tables for data storage

Answer: B

Question #:54

A company hosts historical weather records in Amazon S3. The records are downloaded from the company's website by way of a URL that resolves to a domain name. Users all over the world access this content through subscriptions. A third-party provider hosts the company's root domain name, but the company recently migrated some of its services to Amazon Route 53. The company wants to consolidate contracts, reduce latency for users, and reduce costs related to serving the application to subscribers.

Which solution meets these requirements?

- A. Create a web distribution on Amazon CloudFront to serve the S3 content for the application. Create a CNAME record in a Route 53 hosted zone that points to the CloudFront distribution, resolving to the application's URL domain name.
- B. Create a web distribution on Amazon CloudFront to serve the S3 content for the application. Create an ALIAS record in the Amazon Route 53 hosted zone that points to the CloudFront distribution, resolving

to the application's URL domain name.

- C. Create an A record in a Route 53 hosted zone for the application. Create a Route 53 traffic policy for the web application, and configure a geolocation rule. Configure health checks to check the health of the endpoint and route DNS queries to other endpoints if an endpoint is unhealthy.
- D. Create an A record in a Route 53 hosted zone for the application. Create a Route 53 traffic policy for the web application, and configure a geoproximity rule. Configure health checks to check the health of the endpoint and route DNS queries to other endpoints if an endpoint is unhealthy

Answer: C

Question #:55

A social media company is building a feature for its website. The feature will give users the ability to upload photos. The company expects significant increases in demand during large events and must ensure that the website can handle the upload traffic from users.

Which solution meets these requirements with the MOST scalability?

- A. Upload files from the user's browser to the application servers. Transfer the files to an Amazon S3 bucket.
- B. Provision an AWS Storage Gateway file gateway. Upload files directly from the user's browser to the file gateway.
- C. Generate Amazon S3 presigned URLs in the application. Upload files directly from the user's browser into an S3 bucket
- D. Provision an Amazon Elastic File System (Amazon EFS) file system. Upload files directly from the user's browser to the file system.

Answer: C

Question #:56

A company is hosting 60 TB of production-level data in an Amazon S3 bucket. A solutions architect needs to bring that data on premises for quarterly audit requirements. This export of data must be encrypted while in transit. The company has low network bandwidth in place between AWS and its on-premises data center.

What should the solutions architect do to meet these requirements?

- A. Deploy AWS Migration Hub with 90-day replication windows for data transfer
- B. Deploy an AWS Storage Gateway volume gateway on AWS. Enable a 90-day replication window to transfer the data
- C. Deploy Amazon Elastic File System (Amazon EFS), with lifecycle policies enabled, on AWS. Use it to

transfer the data

- D. Deploy an AWS Snowball device in the on-premises data center after completing an export Job request
In the AWS Snowball console

Answer: D

Question #:57

A solutions architect must design a highly available infrastructure for a website. The website is powered by Windows web servers that run on Amazon EC2 instances. The solutions architect must implement a solution that can mitigate a large-scale DDoS attack that originates from thousands of IP addresses. Downtime is not acceptable for the website.

Which actions should the solutions architect take to protect the website from such an attack? (Select TWO.)

- A. Use AWS Shield Advanced to stop the DDoS attack.
- B. Configure Amazon GuardDuty to automatically block the attackers.
- C. Configure the website to use Amazon CloudFront for both static and dynamic content.
- D. Use an AWS Lambda function to automatically add attacker IP addresses to VPC network ACLs.
- E. Use EC2 Spot Instances in an Auto Scaling group with a target tracking scaling policy that is set to 80% CPU utilization

Answer: A B

Question #:58

A company is deploying a two-tier web application in a VPC. The web tier is using an Amazon EC2 Auto Scaling group with public subnets that span multiple Availability Zones. The database tier consists of an Amazon RDS for MySQL DB instance in separate private subnets. The web tier requires access to the database to retrieve product information.

The web application is not working as intended. The web application reports that it cannot connect to the database. The database is confirmed to be up and running. All configurations for the network ACLs, security groups, and route tables are still in their default states.

What should a solutions architect recommend to fix the application?

- A. Add an explicit rule to the private subnet's network ACL to allow traffic from the web tier's EC2 instances.
- B. Add a route in the VPC route table to allow traffic between the web tier's EC2 instances and the database tier.
- C. Deploy the web tier's EC2 instances and the database tier's RDS instance into two separate VPCs, and

configure VPC peering.

- D. Add an inbound rule to the security group of the database tier's RDS instance to allow traffic from the web tier's security group.

Answer: D

Question #:59

A company's legacy application is currently relying on a single-instance Amazon RDS MySQL database without encryption. Due to new compliance requirements all existing and new data in this database must be encrypted.

How should this be accomplished?

- A. Create an Amazon S3 bucket with server-side encryption enabled Move all the data to Amazon S3 Delete the RDS instance
- B. Enable RDS Multi-AZ mode with encryption at rest enabled. Perform a failover to the standby instance to delete the original instance
- C. Take a snapshot of the RDS instance. Create an encrypted copy of the snapshot. Restore the RDS instance from the encrypted snapshot.
- D. Create an RDS read replica with encryption at rest enabled Promote the read replica to master and switch the application over to the new master Delete the old RDS instance

Answer: C

Question #:60

A company's website hosted on Amazon EC2 instances processes classified data stored in Amazon S3. Due to security concerns, the company requires a private and secure connection between its EC2 resources and Amazon S3.

Which solution meets these requirements?

- A. Set up S3 bucket policies to allow access from a VPC endpoint
- B. Set up an IAM policy to grant read-write access to the S3 bucket,
- C. Set up a NAT gateway to access resources outside the private subnet
- D. Set up an access key ID and a secret access key to access the S3 bucket

Answer: A

Question #:61

A company is running an ASP.NET MVC application on a single Amazon EC2 instance. A recent increase in application traffic is causing slow response times for users during lunch hours. The company needs to resolve this concern with the least amount of configuration.

What should a solutions architect recommend to meet these requirements?

- A. Move the application to AWS Elastic Beanstalk. Configure load-based auto scaling and time-based scaling to handle scaling during lunch hours
- B. Move the application to Amazon Elastic Container Service (Amazon ECS) Create an AWS Lambda function to handle scaling during lunch hours.
- C. Move the application to Amazon Elastic Container Service (Amazon ECS). Configure scheduled scaling for AWS Application Auto Scaling during lunch hours.
- D. Move the application to AWS Elastic Beanstalk. Configure load-based auto scaling, and create an AWS Lambda function to handle scaling during lunch hours.

Answer: A

Question #:62

An ecommerce company has noticed performance degradation of its Amazon RDS based web application. The performance degradation is attributed to an increase in the number of read-only SQL queries triggered by business analysts. A solutions architect needs to solve the problem with minimal changes to the existing web application.

What should the solutions architect recommend?"

- A. Export the data to Amazon DynamoDB and have the business analysts run their queries
- B. Load the data into Amazon ElastiCache and have the business analysts run their queries
- C. Create a read replica of the primary database and have the business analysts run their queries
- D. Copy the data into an Amazon Redshift cluster and have the business analysts run their queries

Answer: C

Question #:63

A company wants to run a hybrid workload for data processing. The data needs to be accessed by on-premises applications for local data processing using an NFS protocol and must also be accessible from the AWS Cloud for further analytics and batch processing.

Which solution will meet these requirements?

- A. Use an AWS Storage Gateway file gateway to provide file storage to AWS: then perform analytics on this data in the AWS Cloud
- B. Use an AWS Storage Gateway tape gateway to copy the backup of the local data to AWS. then perform analytics on this data in the AWS Cloud.
- C. Use an AWS Storage Gateway volume gateway in a stored volume configuration to regularly take snapshots of the local data, then copy the data to AWS.
- D. Use an AWS Storage Gateway volume gateway in a cached volume configuration to back up all the local storage in the AWS Cloud, then perform analytics on this data in the cloud.

Answer: A

Question #:64

A solutions architect is designing a high performance computing (HPC) workload on Amazon EC2. The EC2 instances need to communicate to each other frequently and require network performance with low latency and high throughput.

Which EC2 configuration meets these requirements?

- A. Launch the EC2 instances in a cluster placement group in one Availability Zone
- B. Launch the EC2 instances in a spread placement group in one Availability Zone
- C. Launch the EC2 instances in an Auto Scaling group in two Regions and peer the VPCs
- D. Launch the EC2 instances in an Auto Scaling group spanning multiple Availability Zones

Answer: A

Question #:65

A solutions architect is designing the cloud architecture for a new application that is being deployed on AWS. The application's users will interactively download and upload files. Files that are more than 90 days old will be accessed less frequently than newer files, but all files need to be instantly available. The solutions architect must ensure that the application can scale to store petabytes of data with maximum durability.

Which solution meets these requirements?

- A. Store the files in Amazon S3 Standard. Create an S3 Lifecycle policy that moves objects that are more than 90 days old to S3 Glacier.
- B. Store the files in Amazon S3 Standard. Create an S3 Lifecycle policy that moves objects that are more than 90 days old to S3 Standard-Infrequent Access (S3 Standard-IA).

- C. Store the files in Amazon Elastic Block Store (Amazon EBS) volumes. Schedule snapshots of the volumes. Use the snapshots to archive data that is more than 90 days old.
- D. Store the files in RAID-striped Amazon Elastic Block Store (Amazon EBS) volumes. Schedule snapshots of the volumes. Use the snapshots to archive data that is more than 90 days old.

Answer: B

Question #:66

A company has a stateless web application that runs on AWS Lambda functions that are invoked by Amazon API Gateway. The company wants to deploy the application across multiple AWS Regions to provide Regional failover capabilities.

What should a solutions architect do to route traffic to multiple Regions?

- A. Configure Amazon Route 53 health checks for each Region. Use an active-active failover configuration.
- B. Create an Amazon CloudFront distribution with an origin for each Region. Use CloudFront health checks to route traffic.
- C. Create an AWS Transit Gateway Attach the transit gateway to the API Gateway endpoint in each Region Configure the transit gateway to route requests.
- D. Use AWS Global Accelerator to create an accelerator with endpoints in each Region. Allow Global Accelerator to automatically monitor the health of endpoints and route requests.

Answer: A

Question #:67

A company is implementing new data retention policies for all databases that run on Amazon RDS DB instances. The company must retain daily backups for a minimum period of 2 years. The backups must be consistent and restorable.

Which solution should a solutions architect recommend to meet these requirements?

- A. Create a backup vault in AWS Backup to retain RDS backups. Create a new backup plan with a daily schedule and an expiration period of 2 years after creation. Assign the RDS DB instances to the backup plan.

Configure a backup window for the RDS DB Instances for daily snapshots. Assign a snapshot retention policy of 2 years to each RDS DB instance. Use Amazon Data Lifecycle Manager (Amazon DLM) B. to schedule snapshot deletions.

- B. Configure database transaction logs to be automatically backed up to Amazon CloudWatch Logs with an expiration period of 2 years

- C. Configure an AWS Database Migration Service (AWS DMS) replication task. Deploy a replication instance, and configure a change data capture (CDC) task to stream database changes to Amazon S3 as the target. Configure S3 Lifecycle policies to delete the snapshots after 2 years.

Answer: A

Question #:68

A company needs the ability to analyze the log files of its proprietary application. The logs are stored in JSON format in an Amazon S3 bucket. Queries will be simple and will run on-demand. A solutions architect needs to perform the analysis with minimal changes to the existing architecture.

What should the solutions architect do to meet these requirements with the LEAST amount of operational overhead?

- A. Use Amazon Redshift to load all the content into one place and run the SQL queries as needed.
- B. Use Amazon CloudWatch Logs to store the logs. Run SQL queries as needed from the Amazon CloudWatch console.
- C. Use Amazon Athena directly with Amazon S3 to run the queries as needed.
- D. Use AWS Glue to catalog the logs. Use a transient Apache Spark cluster on Amazon EMR to run the SQL queries as needed.

Answer: B

Question #:69

The application's traffic is often low, but it occasionally grows significantly. During these sudden increases in traffic, DynamoDB returns throttling errors. The result is that error pages are displayed to end users.

What should a solutions architect do to reduce these errors?

- A. Change the DynamoDB table to use on-demand capacity mode.
- B. Create a DynamoDB read replica to scale the read traffic horizontally.
- C. Purchase DynamoDB reserved capacity of 1,000 RCUs and 500 WCUs.
- D. Configure the application to use strongly consistent reads for DynamoDB queries.

Answer: D

Question #:70

A company has deployed a multiplayer game for mobile devices. The game requires live location tracking of players based on latitude and longitude. The data store for the game must support rapid updates and retrieval.

of locations.

The game uses an Amazon RDS for PostgreSQL DB instance with read replicas to store the location data. During peak usage periods, the database is unable to maintain the performance that is needed for reading and writing updates. The game's user base is increasing rapidly.

What should a solutions architect do to improve the performance of the data tier?

- A. Take a snapshot of the existing DB instance. Restore the snapshot with Multi-AZ enabled.
- B. Migrate from Amazon RDS to Amazon Elasticsearch Service (Amazon ES) with Kibana.
- C. Deploy Amazon DynamoDB Accelerator (DAX) in front of the existing DB instance. Modify the game to use DAX.
- D. Deploy an Amazon ElastiCache for Redis cluster in front of the existing DB instance. Modify the game to use Redis.

Answer: D

Question #:71

A solutions architect must provide a fully managed replacement for an on-premises solution that allows employees and partners to exchange files. The solution must be easily accessible to employees connecting from on-premises systems, remote employees, and external partners.

Which solution meets these requirements?

- A. Use AWS Transfer for SFTP to transfer files into and out of Amazon S3.
- B. Use AWS Snowball Edge for local storage and large-scale data transfers.
- C. Use Amazon FSx to store and transfer files to make them available remotely.
- D. Use AWS Storage Gateway to create a volume gateway to store and transfer files to Amazon S3.

Answer: A

Question #:72

The following IAM policy is attached to an IAM group. This is the only policy applied to the group.

```
{  
  "Version": "2012-10-17",  
  "Statement": [  
    {  
      "Sid": "1",  
      "Effect": "Allow",  
      "Action": "ec2:*",  
      "Resource": "*",  
      "Condition": {  
        "StringEquals": {  
          "ec2:Region": "us-east-1"  
        }  
      }  
    },  
    {  
      "Sid": "2",  
      "Effect": "Deny",  
      "Action": [  
        "ec2:StopInstances",  
        "ec2:TerminateInstances"  
      ],  
      "Resource": "*",  
      "Condition": {  
        "BoolIfExists": {"aws:MultiFactorAuthPresent": false}  
      }  
    }  
  ]  
}
```

```
{  
  "sid": "2",  
  "Effect": "Deny",  
  "Action": [  
    "ec2:StopInstances",  
    "ec2:TerminateInstances"  
  ],  
  "Resource": "*",  
  "Condition": {  
    "BoolIfExists": {"aws:MultiFactorAuthPresent": false}  
  }  
}
```

What are the effective IAM permissions of this policy for group members?

- A. Group members are permitted any Amazon EC2 action within the us-east-1 Region. Statements after the Allow permission are not applied.
- B. Group members are denied any Amazon EC2 permissions in the us-east-1 Region unless they are logged in with multi-factor authentication (MFA).
- C. Group members are allowed the ec2 StopInstances and ec2. TerminateInstances permissions for all Regions when logged in with multi-factor authentication (MFA) Group members are permitted any other Amazon EC2 action.
- D. Group members are allowed the ec2 StopInstances and ec2. Terminateinstances permissions for the us-east-1 Region only when logged in with multi-factor authentication (MFA) Group members are permitted any other Amazon EC2 action within the us-east-1 Region.

Answer: D

Question #:73

A company operates a website on Amazon EC2 Linux instances Some of the instances are failing. Troubleshooting points to insufficient swap space on the failed instances. The operations team lead needs a solution to monitor this

What should a solutions architect recommend?

- A. Configure an Amazon CloudWatch SwapUsage metric dimension Monitor the SwapUsage dimension in the EC2 metrics in CloudWatch.
- B. Use EC2 metadata to collect information, then publish it to Amazon CloudWatch custom metrics Monitor SwapUsage metrics in CloudWatch
- C. Install an Amazon CloudWatch agent on the instances. Run an appropriate script on a set schedule. Monitor SwapUtilization metrics in CloudWatch
- D. Enable detailed monitoring in the EC2 console Create an Amazon CloudWatch SwapUtilization custom metric Monitor SwapUtilization metrics in CloudWatch

Answer: A

Question #:74

A company must migrate 20 TB of data from a data centre to the AWS Cloud within 30 days. The company's network bandwidth is limited to 15 Mbps and cannot exceed 70% utilization.

What should a solutions architect do to meet these requirements?

- A. Use AWS Snowball.

- B. Use AWS DataSync
- C. Use a secure VPN connection.
- D. Use Amazon S3 Transfer Acceleration

Answer: A

Question #:75

A company has developed a microservices application. It uses a client-facing API with Amazon API Gateway and multiple internal services hosted on Amazon EC2 instances to process user requests. The API is designed to support unpredictable surges in traffic, but internal services may become overwhelmed and unresponsive for a period of time during surges. A solutions architect needs to design a more reliable solution that reduces errors when internal services become unresponsive or unavailable.

Which solution meets these requirements?

- A. Use AWS Auto Scaling to scale up internal services when there is a surge in traffic.
- B. Use different Availability Zones to host internal services. Send a notification to a system administrator when an internal service becomes unresponsive.
- C. Use an Elastic Load Balancer to distribute the traffic between internal services. Configure Amazon CloudWatch metrics to monitor traffic to internal services.
- D. Use Amazon Simple Queue Service (Amazon SQS) to store user requests as they arrive. Change the internal services to retrieve the requests from the queue for processing.

Answer: D

Question #:76

A company is developing a new online gaming application. The application will run on Amazon EC2 instances in multiple AWS Regions and will have a high number of globally distributed users. A solutions architect must design the application to optimize network latency for the users.

Which actions should the solutions architect take to meet these requirements? (Select TWO.)

- A. Configure AWS Global Accelerator. Create Regional endpoint groups in each Region where an EC2 fleet is hosted.
- B. Create a content delivery network (CDN) by using Amazon CloudFront. Enable caching for static and dynamic content, and specify a high expiration period.
- C. Integrate AWS Client VPN into the application. Instruct users to select which Region is closest to them.

after they launch the application. Establish a VPN connection to that Region

- D. Create an Amazon Route 53 weighted routing policy Configure the routing policy to give the highest weight to the EC2 instances in the Region that has the largest number of users.
- E. Configure an Amazon API Gateway endpoint in each Region where an EC2 fleet is hosted Instruct users to select which Region is closest to them after they launch the application. Use the API Gateway endpoint that is closest to them.

Answer: A B

Question #:77

A solutions architect must design a database solution for a high-traffic ecommerce web application. The database stores customer profiles and shopping cart information. The database must support a peak load of several million requests each second and deliver responses in milliseconds The operational overhead for managing and scaling the database must be minimized

Which database solution should the solutions architect recommend?

- A. Amazon Aurora
- B. Amazon DynamoDB
- C. Amazon RDS
- D. Amazon Redshift

Answer: B

Question #:78

A company uses on-premises servers to host Its application. The company is running out of storage capacity. The applications use both block storage and NFS storage. The company needs a high-performing solution that supports local caching without re-architecting its existing applications

Which combination of actions should a solutions architect take to meet these requirements'? (Select TWO.)

- A. Mount Amazon S3 as a file system to the on-premises servers
- B. Deploy an AWS Storage Gateway Me gateway to replace NFS storage
- C. Deploy AWS Snowball Edge to provision NFS mounts to on-premises servers
- D. Deploy an AWS Storage Gateway volume gateway to replace the block storage
- E. Deploy Amazon Elastic File System (Amazon EFS) volumes and mount them to on-premises servers

Answer: B D

Question #:79

A user wants to list the IAM role that is attached to their Amazon EC2 Instance. The user has login access to the EC2 instance but does not have IAM permissions. What should a solutions architect do to retrieve this information?

A)

```
Run the following EC2 command:  
curl http://169.254.169.254/latest/meta-data/iam/info
```

B)

```
Run the following EC2 command:  
curl http://169.254.169.254/latest/user-data/iam/info
```

C)

```
Run the following EC2 command:  
http://169.254.169.254/latest/dynamic/instance-identity/
```

D)

```
Run the following AWS CLI command:  
aws iam get-instance-profile --instance-profile-name ExampleInstanceProfile
```

A. Option A

B. Option B

C. Option C

D. Option D

Answer: A

Question #:80

A solution architect at a company is designing the architecture for a two-tiered web application. The web application is composed of an internet-facing application load balancer that forwards traffic to an auto scaling group of Amazon EC2 instances. The EC2 instances must be able to access a database that runs on Amazon RDS.

The company has requested a defence-in-depth approach to the network layout. The company does not want to rely solely on security groups or network ACLs. Only the minimum resources that are necessary should be routable from the internet.

Which network design should the solutions architect recommend to meet these requirements?

- A. Place the ALB, EC2 instances and RDS database in private subnets.
- B. Place the ALB in public subnets. Place the EC2 instances and RDS database in private subnets
- C. Place the ALB and EC2 instances in public subnets. Place the RDS database in private subnets
- D. Place the ALB outside the VPC. Place the EC2 instances and RDS database in private subnets.

Answer: B

Question #:81

A company has an application that uses Amazon Elastic File System (Amazon EFS) to store data. The files are 1 GB in size or larger and are accessed often only for the first few days after creation. The application data is shared across a cluster of Linux servers. The company wants to reduce storage costs for the application.

What should a solutions architect do to meet these requirements?

- A. Implement Amazon FSx and mount the network drive on each server
- B. Move the files from Amazon EFS and store them locally on each Amazon EC2 instance
- C. Configure a lifecycle policy to move the files to the EFS Infrequent Access (IA) storage class after 7 days.
- D. Move the files to Amazon S3 with S3 Lifecycle policies enabled. Rewrite the application to support mounting the S3 bucket

Answer: C

Question #:82

A company's website provides users with downloadable historical performance reports. The website needs a solution that will scale to meet the company's website demands globally. The solution should be cost-effective, limit the provisioning of infrastructure resources, and provide the fastest possible response time.

Which combination should a solutions architect recommend to meet these requirements?

- A. Amazon CloudFront and Amazon S3
- B. AWS Lambda and Amazon DynamoDB

- C. Application Load Balancer with Amazon EC2 Auto Scaling
- D. Amazon Route 53 with internal Application Load Balancers

Answer: A

Question #:83

A company runs an application on a group of Amazon Linux EC2 instances. For compliance reasons, the company must retain all application log files for 7 years. The log files will be analyzed by a reporting tool that must be able to access all the files concurrently.

Which storage solution meets these requirements MOST cost-effectively?

- A. Amazon Elastic Block Store (Amazon EBS)
- B. Amazon Elastic File System (Amazon EFS)
- C. Amazon EC2 instance store
- D. Amazon S3

Answer: D

Question #:84

A website runs a web application that receives a burst of traffic each day at noon. The users upload new pictures and context daily, but have complaining of timeout. The architect uses Amazon EC2 Auto Scaling groups, and the custom application consistently takes 1 minutes to initiate upon boot up before responding to user requests.

How should a solutions architect redesign the architect to better respond to changing traffic?

- A. Configure a Network Load Balancer with a slow start configuration.
- B. Configure AWS ElastiCache for Redis to offload direct requests to the servers.
- C. Configure an Auto Scaling step scaling policy with an instance warmup condition.
- D. Configure Amazon CloudFront to use an Application Load Balancer as the origin.

Answer: C

Explanation

<https://docs.aws.amazon.com/autoscaling/ec2/userguide/as-scaling-simple-step.html#as-step-scaling-warmup>

"If you are creating a step policy, you can specify the number of seconds that it takes for a newly launched instance to warm up. Until its specified warm-up time has expired, an instance is not counted toward the aggregated metrics of the Auto Scaling group. Using the example in the Step Adjustments section, suppose that the metric gets to 60, and then it gets to 62 while the new instance is still warming up. The current capacity is still 10 instances, so 1 instance is added (10 percent of 10 instances). However, the desired capacity of the group is already 11 instances, so the scaling policy does not increase the desired capacity further. If the metric gets to 70 while the new instance is still warming up, we should add 3 instances (30 percent of 10 instances). However, the desired capacity of the group is already 11, so we add only 2 instances, for a new desired capacity of 13 instances"

Question #:85

A company is designing an internet-facing web application. The application runs on Amazon EC2 for Linux-based instances that store sensitive user data in Amazon RDS MySQL Multi-AZ DB instances. The EC2 instances are in public subnets, and the RDS DB instances are in private subnets. The security team has mandated that the DB instances be secured against web-based attacks.

What should a solutions architect recommend?

- A. Ensure the EC2 instances are part of an Auto Scaling group and are behind an Application Load Balancer. Configure the EC2 instance iptables rules to drop suspicious web traffic. Create a security group for the DB instances. Configure the RDS security group to only allow port 3306 inbound from the individual EC2 instances.
- B. Ensure the EC2 instances are part of an Auto Scaling group and are behind an Application Load Balancer. Move DB instances to the same subnets that EC2 instances are located in. Create a security group for the DB instances. Configure the RDS security group to only allow port 3306 inbound from the individual EC2 instances.
- C. Ensure the EC2 instances are part of an Auto Scaling group and are behind an Application Load Balancer. Use AWS WAF to monitor inbound web traffic for threats. Create a security group for the web application servers and a security group for the DB instances. Configure the RDS security group to only allow port 3306 inbound from the web application server security group.
- D. Ensure the EC2 instances are part of an Auto Scaling group and are behind an Application Load Balancer. Use AWS WAF to monitor inbound web traffic for threats. Configure the Auto Scaling group to automatically create new DB instances under heavy traffic. Create a security group for the RDS DB instances. Configure the RDS security group to only allow port 3306 inbound.

Answer: C

Question #:86

An ecommerce company is creating an application that requires a connection to a third-party payment service to process payments. The payment service needs to explicitly allow the public IP address of the server that is making the payment request. However, the company's security policies do not allow any server to be exposed directly to the public internet.

Which solution will meet these requirements?

- A. Provision an Elastic IP address. Host the application servers on Amazon EC2 instances in a private subnet. Assign the public IP address to the application servers.
- B. Create a NAT gateway in a public subnet. Host the application servers on Amazon EC2 instances in a private subnet. Route payment requests through the NAT gateway.
- C. Deploy an Application Load Balancer (ALB). Host the application servers on Amazon EC2 instances in a private subnet. Route the payment requests through the ALB.
- D. Set up an AWS Client VPN connection to the payment service. Host the application servers on Amazon EC2 instances in a private subnet. Route the payment requests through the VPN.

Answer: C

Question #:87

A company is running a web application on Amazon EC2 instances in an Auto Scaling group. The application uses a database that runs on an Amazon RDS for PostgreSQL DB instance. The application performs slowly as traffic increases, and the database experiences a heavy read load during periods of high traffic.

Which actions should a solutions architect take to resolve these performance issues? (Select TWO.)

- A. Enable auto scaling for the DB instance.
- B. Create a read replica for the DB instance. Configure the application to send read traffic to the read replica.
- C. Enable Multi-AZ for the DB instance. Configure the application to send read traffic to the standby DB instance.
- D. Create an Amazon ElastiCache cluster. Configure the application to cache query results in the ElastiCache cluster.
- E. Configure the Auto Scaling group subnets to ensure that the EC2 instances are provisioned in the same Availability Zone as the DB instance.

Answer: A D

Question #:88

A solution architect is designing a new service behind API Gateway. The request pattern for the service will be unpredictable and can change suddenly from 0 request to over 500 per second. The total size of the data that needs to be persisted in the database is currently less than 1 GB with unpredictable future growth. Data can be queried using sampling key-value requests.

Which combination of AWS services would meet these requirements? (Select TWO.)

- A. AWS Fargate
- B. AWS Lambda
- C. Amazon DynamoDB
- D. Amazon EC2 Auto Scaling
- E. MySQL-compatible Amazon Aurora

Answer: B C

Question #:89

A company runs an application using Amazon ECS. The application creates resized versions of an original Image and then makes Amazon S3 API calls to store the resized images in Amazon S3

How can a solutions architect ensure that the application has permission to access Amazon S3?

- A. Update the S3 role in AWS IAM to allow read/write access from Amazon ECS and then relaunch the container.
- B. Create an IAM role with S3 permissions and then specify that role as the taskRoleArn in the task definition.
- C. Create a security group that allows access from Amazon ECS to Amazon S3 and update the launch configuration used by the ECS cluster.
- D. Create an IAM user with S3 permissions, and then relaunch the Amazon EC2 instances for the ECS cluster while logged in as this account.

Answer: B

Question #:90

A company is migrating US applications to AWS. Currently, applications that run on premises generate hundreds of terabytes of data that is stored on a shared file system. The company is running an analytics application in the cloud that runs hourly to generate insights from this data.

The company needs a solution to handle the ongoing data transfer between the on-premises shared file system and Amazon S3. The solution also must be able to handle occasional interruptions in internet connectivity.

Which solution should the company use for the data transfer to meet these requirements?

- A. AWS DataSync
- B. AWS Migration Hub
- C. AWS Snowball Edge Storage Optimized

D. AWS Transfer for SFTP

Answer: A

Question #:91

A solutions architect is designing the architecture for a company website that is composed of static content. The company's target customers are located in the United States and Europe.

Which architecture should the solutions architect recommend to MINIMIZE cost?

Store the website files on Amazon S3 in the us-east-2 Region. Use an Amazon CloudFront distribution with the price class configured to limit the edge locations in use.

Store the website files on Amazon S3 in the us-east-2 Region. Use an Amazon CloudFront distribution with the price class configured to maximize the use of edge locations.

Store the website files on Amazon S3 in the us-east-2 Region and the eu-west-1 Region. Use an Amazon CloudFront geolocation routing policy to route requests to the closest Region to the user.

Store the website files on Amazon S3 in the us-east-2 Region and the eu-west-1 Region. Use an Amazon CloudFront distribution with an Amazon Route 53 latency routing policy to route requests to the closest Region to the user.

D

Question #:92

A company runs a web application that is backed by Amazon RDS. A new database administrator caused data loss by accidentally editing information in a database table. To help recover from this type of incident, the company wants the ability to restore the database to its state from 5 minutes before any change within the last 30 days.

Which feature should the solutions architect include in the design to meet this requirement?

- A. Read replicas
- B. Manual snapshots
- C. Automated backups
- D. Multi-AZ deployments

Answer: C

Question #:93

A company has applications that are deployed in multiple AWS Regions. The applications use an architecture

that is based on Amazon EC2, Amazon Elastic Block Store (Amazon EBS), Amazon Elastic File System (Amazon EFS), and Amazon DynamoDB

The company lacks a mechanism for centralized data backup. A solutions architect must centralize data backup with the least possible operational effort.

What should the solutions architect do to meet these requirements?

- A. Tag all resources by project Use AWS Systems Manager to set up snapshots by project and set DynamoDB incremental backups.
- B. Tag all resources by project. Create backup plans in AWS Backup to back up the data by tag name according to each project's needs.
- C. Tag all resources by project Create an AWS Lambda function to run on schedule and take snapshots of each EC2 instance, EBS volume, and EFS file system by project Configure the function to invoke DynamoDB on-demand backup.
- D. Use AWS CloudFormation to create a template for every new project so that all resources can be recreated at any time. Set the template to take daily snapshots of each EC2 instance r EBS volume and EFS file system Set the template to use DynamoDB on-demand backup for daily backups

Answer: B

Question #:94

A company has two applications: a sender application that sends messages with payloads to be processed and a processing application intended to receive the messages with payloads The company wants to implement an AWS service to handle messages between the two applications The sender application can send about 1,000 messages each hour The messages may take up to 2 days to be processed If the messages fail to process, they must be retained so that they do not impact the processing of any remaining messages.

Which solution meets these requirements and is the MOST operationally efficient?

- A. Set up an Amazon EC2 instance running a Redis database Configure both applications to use the instance Store process, and delete the messages., respectively
- B. Use an Amazon Kinesis data stream to receive the messages from the sender application. Integrate the processing application with the Kinesis Client Library (KCL).
- C. Integrate the sender and processor applications with an Amazon Simple Queue Service (Amazon SQS) queue Configure a dead-letter queue to collect the messages that failed to process
- D. Subscribe the processing application to an Amazon Simple Notification Service (Amazon SNS) topic to receive notifications to process, integrate the sender application to write to the SNS topic.

Answer: C

Question #:95

A solutions architect must migrate a Windows Internet Information Services (IIS) web application to AWS. The application currently relies on a file share hosted in the user's on-premises network-attached storage (NAS). The solutions architect has proposed migrating the MS web servers to Amazon EC2 instances in multiple Availability Zones that are connected to the storage solution, and configuring an Elastic Load Balancer attached to the instances.

Which replacement to the on-premises file share is MOST resilient and durable?

- A. Migrate the file share to Amazon RDS
- B. Migrate the file share to AWS Storage Gateway
- C. Migrate the file share to Amazon FSx for Windows File Server
- D. Migrate the file share to Amazon Elastic File System (Amazon EFS)

Answer: C

Question #:96

A company runs a website on Amazon EC2 instances behind an ELB. Application Load Balancer Amazon Route 53 is used for the DNS. The company wants to set up a backup website with a message including a phone number and email address that users can reach if the primary website is down.

How should the company deploy this solution?

- A. Use Amazon S3 website hosting for the backup website and a Route 53 failover routing policy
- B. Use Amazon S3 website hosting for the backup website and a Route 53 latency routing policy
- C. Deploy the application in another AWS Region and use ELB health checks for failover routing.
- D. Deploy the application in another AWS Region and use server-side redirection on the primary website

Answer: A

Question #:97

A company's database is hosted on an Amazon Aurora MySQL DB cluster in the us-east-1 Region. The database is 4 TB in size. The company needs to expand its disaster recovery strategy to the us-west-2 Region. The company must have the ability to fail over to us-west-2 with a recovery time objective (RTO) of 15 minutes.

What should a solutions architect recommend to meet these requirements?

- A. Create a Multi-Region Aurora MySQL DB cluster in us-east-1 and us-west-2. Use an Amazon Route 53

health check to monitor us-east-1 and fail over to us-west-2 upon failure

- B. Take a snapshot of the DB cluster in us-east-1. Configure an Amazon EventBridge (Amazon CloudWatch Events) rule that invokes an AWS Lambda function upon receipt of resource events. Configure the Lambda function to copy the snapshot to us-west-2 and restore the snapshot in us-west-2 when failure is detected.
- C. Create an AWS CloudFormation script to create another Aurora MySQL DB cluster in us-west-2 in case of failure. Configure an Amazon EventBridge (Amazon CloudWatch Events) rule that invokes an AWS Lambda function upon receipt of resource events. Configure the Lambda function to deploy the AWS CloudFormation stack in us-west-2 when failure is detected.
- D. Recreate the database as an Aurora global database with the primary DB cluster in us-east-1 and a secondary DB cluster in us-west-2. Configure an Amazon EventBridge (Amazon CloudWatch Events) rule that invokes an AWS Lambda function upon receipt of resource events. Configure the Lambda function to promote the DB cluster in us-west-2 when failure is detected.

Answer: B

Question #:98

A company runs a three-tier web application in a VPC across multiple Availability Zones. Amazon EC2 instances run in an Auto Scaling group for the application tier.

The company needs to make an automated scaling plan that will analyze each resource's daily and weekly historical workload trends. The configuration must scale resources appropriately according to both the forecast and live changes in utilization.

Which scaling strategy should a solutions architect recommend to meet these requirements?

- A. Implement dynamic scaling with step scaling based on average CPU utilization from the EC2 instances.
- B. Enable predictive scaling to forecast and scale. Configure dynamic scaling with target tracking.
- C. Create an automated scheduled scaling action based on the traffic patterns of the web application.
- D. Set up a simple scaling policy. Increase the cool down period based on the EC2 instance start up time.

Answer: B

Question #:99

A company is developing a serverless web application that gives users the ability to interact with real-time analytics from online games. The data from the games must be streamed in real time. The company needs a durable, low-latency database option for user data. The company does not know how many users will use the application. Any design considerations must provide response times of single-digit milliseconds as the application scales.

Which combination of AWS services will meet these requirements? (Select TWO.)

- A. Amazon CloudFront
- B. Amazon DynamoDB
- C. Amazon Kinesis
- D. Amazon RDS
- E. AWS Global Accelerator

Answer: A B

Question #:100

A company is automating an order management application. The company's development team has decided to use SFTP to transfer and store the business-critical information files. The files must be encrypted and must be highly available. The files also must be automatically deleted a month after they are created.

Which solution meets these requirements with the LEAST operational overhead?

- A. Configure an Amazon S3 bucket with encryption enabled. Use AWS transfer for SFTP to securely transfer the files to the S3 bucket. Apply an AWS Transfer for SFTP file retention policy to delete the files after a month.
- B. Install an SFTP service on an Amazon EC2 instance. Mount an Amazon Elastic File System (Amazon EFS) file share on the EC2 instance. Enable cron to delete the files after a month.
- C. Configure an Amazon Elastic File System (Amazon EFS) file system with encryption enabled. Use AWS Transfer for SFTP to securely transfer the files to the EFS file system. Apply an EFS lifecycle policy to automatically delete the files after a month.
- D. Configure an Amazon S3 bucket with encryption enabled. Use AWS Transfer for SFTP to securely transfer the files to the S3 bucket. Apply S3 Lifecycle rules to automatically delete the files after a month.

Answer: D

Question #:101

A company has multiple AWS accounts for various departments. One of the departments wants to share an Amazon S3 bucket with all other departments. Which solution will require the LEAST amount of effort?

- A. Enable cross-account S3 replication for the bucket
- B. Create a pre-signed URL for the bucket and share it with other departments

- C. Set the S3 bucket policy to allow cross-account access to other departments
- D. Create IAM users for each of the departments and configure a read-only IAM policy

Answer: C

Question #:102

A company recently signed a contract with an AWS Managed Service Provider (MSP) Partner for help with an application migration initiative. A solutions architect needs to share an Amazon Machine Image (AMI) from an existing AWS account with the MSP Partner's AWS account. The AMI is backed by Amazon Elastic Block Store (Amazon EBS) and uses a customer managed customer master key (CMK) to encrypt EBS volume snapshots.

What is the MOST secure way for the solutions architect to share the AMI with the MSP Partner's AWS account?

- A. Make the encrypted AMI and snapshots publicly available. Modify the CMK's key policy to allow the MSP Partner's AWS account to use the key
- B. Modify the launchPermission property of the AMI. Share the AMI with the MSP Partner's AWS account only. Modify the CMK's key policy to allow the MSP Partner's AWS account to use the key.
- C. Modify the launchPermission property of the AMI. Share the AMI with the MSP Partner's AWS account only. Modify the CMK's key policy to trust a new CMK that is owned by the MSP Partner for encryption.
- D. Export the AMI from the source account to an Amazon S3 bucket in the MSP Partner's AWS account. Encrypt the S3 bucket with a CMK that is owned by the MSP Partner. Copy and launch the AMI in the MSP Partner's AWS account.

Answer: A

Question #:103

A solutions architect must create a highly available bastion host architecture. The solution needs to be resilient within a single AWS Region and should require only minimal effort to maintain.

What should the solutions architect do to meet these requirements?

- A. Create a Network Load Balancer backed by an Auto Scaling group with a UDP listener.
- B. Create a Network Load Balancer backed by a Spot Fleet with instances in a partition placement group.
- C. Create a Network Load Balancer backed by the existing servers in different Availability Zones as the target.

- D. Create a Network Load Balancer backed by an Auto Scaling group with instances in multiple Availability Zones as the target

Answer: D

Question #:104

A company has a web application with sporadic usage patterns. There is heavy usage at the beginning of each month, moderate usage at the start of each week, and unpredictable usage during the week. The application consists of a web server and a MySQL database server running inside the data center. The company would like to move the application to the AWS Cloud and needs to select a cost-effective database platform that will not require database modifications.

Which solution will meet these requirements?"

- A. Amazon DynamoDB
- B. Amazon RDS for MySQL
- C. MySQL-compatible Amazon Aurora Serverless
- D. MySQL deployed on Amazon EC2 in an Auto Scaling group

Answer: B

Question #:105

A company receives inconsistent service from its data center provider because the company is headquartered in an area affected by natural disasters. The company is not ready to fully migrate to the AWS Cloud but it wants a failover environment on AWS in case the on-premises data center fails.

The company runs web servers that connect to external vendors. The data available on AWS and on premises must be uniform.

Which solution should a solutions architect recommend that has the LEAST amount of downtime?"

- A. Configure an Amazon Route 53 failover record. Run application servers on Amazon EC2 instances behind an Application Load Balancer in an Auto Scaling group. Set up AWS Storage Gateway with stored volumes to back up data to Amazon S3.
- B. Configure an Amazon Route 53 failover record. Execute an AWS CloudFormation template from a script to create Amazon EC2 instances behind an Application Load Balancer. Set up AWS Storage Gateway with stored volumes to back up data to Amazon S3.
- C. Configure an Amazon Route 53 failover record. Set up an AWS Direct Connect connection between a VPC and the data center. Run application servers on Amazon EC2 in an Auto Scaling group. Run an AWS Lambda function to execute an AWS CloudFormation template to create an Application Load Balancer.

- D. Configure an Amazon Route 53 failover record Run an AWS Lambda function to execute an AWS CloudFormation template to launch two Amazon EC2 instances Set up AWS Storage Gateway with stored volumes to back up data to Amazon S3 Set up an AWS Direct Connect connection between a VPC and the data center

Answer: A

Question #:106

A bicycle sharing company is developing a multi-tier architecture to track the location of its bicycles during peak operating hours The company wants to use these data points in its existing analytics platform A solutions architect must determine the most viable multi-tier option to support this architecture The data points must be accessible from the REST API.

Which action meets these requirements for storing and retrieving location data?

- A. Use Amazon Athena with Amazon S3
- B. Use Amazon API Gateway with AWS Lambda
- C. Use Amazon QuickSight with Amazon Redshift.
- D. Use Amazon API Gateway with Amazon Kinesis Data Analytics

Answer: D

Question #:107

A company runs an application on Amazon EC2 instances. The application is deployed in private subnets in three Availability Zones of the us-east-1 Region. The instances must be able to connect to the internet to download files The company wants a design that is highly available across the Region.

Which solution should be implemented to ensure that there are no disruptions to internet connectivity?

- A. Deploy a NAT instance in a private subnet of each Availability Zone.
- B. Deploy a NAT gateway in a public subnet of each Availability Zone
- C. Deploy a transit gateway in a private subnet of each Availability Zone.
- D. Deploy an internet gateway in a public subnet of each Availability Zone

Answer: B

Question #:108

A solutions architect is designing a security solution for a company that wants to provide developers with individual AWS accounts through AWS Organizations, while also maintaining standard security controls. Because the individual developers will have AWS account root user-level access to their own accounts, the solutions architect wants to ensure that the mandatory AWS CloudTrail configuration that is applied to new developer accounts is not modified.

Which action meets these requirements?

- A. Create an IAM policy that prohibits changes to CloudTrail, and attach it to the root user
- B. Create a new trail in CloudTrail from within the developer accounts with the organization trails option enabled.
- C. Create a service control policy (SCP) that prohibits changes to CloudTrail, and attach it to the developer accounts
- D. Create a service-linked role for CloudTrail with a policy condition that allows changes only from an Amazon Resource Name (ARN) in the master account

Answer: C

Question #:109

A solutions architect needs to design a network that will allow multiple Amazon EC2 instances to access a common data source used for mission-critical data that can be accessed by all the EC2 instances simultaneously. The solution must be highly scalable, easy to implement, and support the NFS protocol.

Which solution meets these requirements?

- A. Create an Amazon EFS file system. Configure a mount target in each Availability Zone. Attach each instance to the appropriate mount target.
- B. Create an additional EC2 instance and configure it as a file server. Create a security group that allows communication between the instances and apply that to the additional instance.
- C. Create an Amazon S3 bucket with the appropriate permissions. Create a role in AWS IAM that grants the correct permissions to the S3 bucket. Attach the role to the EC2 instances that need access to the data.
- D. Create an Amazon EBS volume with the appropriate permissions. Create a role in AWS IAM that grants the correct permissions to the EBS volume. Attach the role to the EC2 instances that need access to the data.

Answer: A

Question #:110

A solutions architect is redesigning a monolithic application to be a loosely coupled application composed of

two microservices: Microservice A and Microservice B

Microservice A places messages in a main Amazon Simple Queue Service (Amazon SQS) queue for Microservice B to consume. When Microservice B fails to process a message after four retries, the message needs to be removed from the queue and stored for further investigation.

What should the solutions architect do to meet these requirements?

- A. Create an SQS dead-letter queue. Microservice B adds failed messages to that queue after it receives and fails to process the message four times.
- B. Create an SQS dead-letter queue. Configure the main SQS queue to deliver messages to the dead-letter queue after the message has been received four times.
- C. Create an SQS queue for failed messages. Microservice A adds failed messages to that queue after Microservice B receives and fails to process the message four times.
- D. Create an SQS queue for failed messages. Configure the SQS queue for failed messages to pull messages from the main SQS queue after the original message has been received four times.

Answer: B

Explanation

<https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-dead-letter-queues.html>

Question #: 111

A company that operates a web application on premises is preparing to launch a newer version of the application on AWS. The company needs to route requests to either the AWS-hosted or the on-premises-hosted application based on the URL query string. The on-premises application is not available from the Internet, and a VPN connection is established between Amazon VPC and the company's data center. The company wants to use an Application Load Balancer (ALB) for this launch.

Which solution meets these requirements?

- A. Use two ALBs: one for on premises and one for the AWS resource. Add hosts to each target group of each ALB. Route with Amazon Route 53 based on the URL query string.
- B. Use two ALBs; one for on premises and one for the AWS resource. Add hosts to the target group of each ALB. Create a software router on an EC2 instance based on the URL query string.
- C. Use one ALB with two target groups: one for the AWS resource and one for on premises. Add hosts to each target group of the ALB. Configure listener rules based on the URL query string.
- D. Use one ALB with two AWS Auto Scaling groups: one for the AWS resource and one for on premises. Add hosts to each Auto Scaling group. Route with Amazon Route 53 based on the URL query string.

Answer: C

Question #:112

A social media company allows users to upload images to its website. The website runs on Amazon EC2 instances. During upload requests, the website resizes the images to a standard size and stores the resized images in Amazon S3. Users are experiencing slow upload requests to the website.

The company needs to reduce coupling within the application and improve website performance. A solutions architect must design the most operationally efficient process for image uploads.

Which combination of actions should the solutions architect take to meet these requirements? (Select TWO.)

- A. Configure the application to upload images to S3 Glacier.
- B. Configure the web server to upload the original images to Amazon S3.
- C. Configure the application to upload images directly from each user's browser to Amazon S3 through the use of a presigned URL.
- D. Configure S3 Event Notifications to invoke an AWS Lambda function when an image is uploaded. Use the function to resize the image.
- E. Create an Amazon EventBridge (Amazon CloudWatch Events) rule that invokes an AWS Lambda function on a schedule to resize uploaded images.

Answer: D E

Question #:113

A leasing company generates and emails PDF statements every month for all its customers. Each statement is about 400 KB in size. Customers can download their statements from the website for up to 30 days from when the statements were generated. At the end of their 3-year lease, the customers are emailed a ZIP file that contains all the statements.

What is the MOST cost-effective storage solution for this situation?

- A. Store the statements using the Amazon S3 Standard storage class. Create a lifecycle policy to move the statements to Amazon S3 Glacier storage after 1 day.
- B. Store the statements using the Amazon S3 Glacier storage class. Create a lifecycle policy to move the statements to Amazon S3 Glacier Deep Archive storage after 30 days.
- C. Store the statements using the Amazon S3 Standard storage class. Create a lifecycle policy to move the statements to Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) storage after 30 days.
- D. Store the statements using the Amazon S3 Standard-Infrequent Access (S3 Standard-IA) storage class. Create a lifecycle policy to move the statements to Amazon S3 Glacier storage after 30 days.

Answer: D

Question #:114

A company needs to store 160TB of data for an indefinite of time. The company must be able to use standard SQL and business intelligence tools to query all of the data. The data will be queried no more than twice each month.

What is the MOST cost-effective solution that meets these requirements?

- A. Store the data in Amazon Aurora Serverless with MySQL . Use an SQL client to query the data.
- B. Store the data in Amazon S3. Use AWS Glue. Amazon Athena. JDBC and ODBC drivers to query the data.
- C. Store the data in an Amazon EMR cluster with EMR File System (EMRFS) as the storage layer use Apache Presto to query the data.
- D. Store a subset of the data in Amazon Redshift, and store the remaining data in Amazon S3. Use Amazon Redshift Spectrum to query the S3 data.

Answer: D

Question #:115

A company is designing a new web service that will run on Amazon EC2 instances behind an Elastic Load Balancer. However many of the web service clients can only reach IP addresses whitelisted on their firewalls.

What should a solutions architect recommend to meet the clients' needs?

- A. A Network Load Balancer with an associated Elastic IP address
- B. An Application Load Balancer with an associated Elastic IP address.
- C. An A record in an Amazon Route 53 hosted zone pointing to an Elastic IP address
- D. An EC2 instance with a public IP address running as a proxy in front of the load balancer.

Answer: A

Question #:116

A company's infrastructure consists of hundreds of Amazon EC2 instances that use Amazon Elastic Block Store (Amazon EBS) storage. A solutions architect must ensure that every EC2 instance can be recovered after a disaster

What should the solutions architect do to meet this requirement with the LEAST amount of effort?

- A. Take a snapshot of the EBS storage that is attached to each EC2 instance Create an AWS CloudFormation template to launch new EC2 instances from the EBS storage.
- B. Take a snapshot of the EBS storage that is attached to each EC2 instance. Use AWS Elastic Beanstalk to set the environment based on the EC2 template and attach the EBS storage.
- C. Use AWS Backup to set up a backup plan for the entire group of EC2 instances. Use the AWS Backup API or the AWS CLI to speed up the restore process for multiple EC2 instances
- D. Create an AWS Lambda function to take a snapshot of the EBS storage that is attached to each EC2 instance and copy the Amazon Machine Images (AMIs). Create another Lambda function to perform the restores with the copied AMIs and attach the EBS storage.

Answer: C

Question #:117

A media company is evaluating the possibility of moving its systems to the AWS Cloud. The company needs at least 10 TB of storage with the maximum possible I/O performance for video processing, 300 TB of very durable storage for storing media content, and 900 TB of storage to meet requirements for archival media that is not in use anymore.

Which set of services should a solutions architect recommend to meet these requirements?

- A. Amazon EBS for maximum performance, Amazon S3 for durable data storage, and Amazon S3 Glacier for archival storage
- B. Amazon EBS for maximum performance, Amazon EFS for durable data storage and Amazon S3 Glacier for archival storage
- C. Amazon EC2 instance store for maximum performance. Amazon EFS for durable data storage and Amazon S3 for archival storage
- D. Amazon EC2 Instance store for maximum performance. Amazon S3 for durable data storage, and Amazon S3 Glacier for archival storage

Answer: A

Question #:118

A company has a service that produces event data. The company wants to use AWS to process the event data as it is received. The data is written in a specific order that must be maintained throughout processing. The company wants to implement a solution that minimizes operational overhead.

How should a solutions architect accomplish this?

- A. Create an Amazon Simple Queue Service (Amazon SQS) FIFO queue to hold messages. Set up an AWS Lambda function to process messages from the queue.

- B. Create an Amazon Simple Notification Service (Amazon SNS) topic to deliver notifications containing payloads to process. Configure an AWS Lambda function as a subscriber.
- C. Create an Amazon Simple Queue Service (Amazon SQS) standard queue to hold messages. Set up an AWS Lambda function to process messages from the queue independently.
- D. Create an Amazon Simple Notification Service (Amazon SNS) topic to deliver notifications containing payloads to process. Configure an Amazon Simple Queue Service (Amazon SQS) queue as a subscriber.

Answer: A

Question #:119

A solutions architect is designing the architecture for a software demonstration environment. The environment will run on Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer (ALB). The system will experience significant increases in traffic during working hours but is not required to operate on weekends.

Which combination of actions should the solutions architect take to ensure that the system can scale to meet demand? (Select TWO)

- A. Use AWS Auto Scaling to adjust the ALB capacity based on request rate.
- B. Use AWS Auto Scaling to scale the capacity of the VPC internet gateway.
- C. Launch the EC2 instances in multiple AWS Regions to distribute the load across Regions.
- D. Use a target tracking scaling policy to scale the Auto Scaling group based on instance CPU utilization.
- E. Use scheduled scaling to change the Auto Scaling group minimum, maximum, and desired capacity to zero for weekends. Revert to the default values at the start of the week.

Answer: D E

Question #:120

A company has created an isolated backup of its environment in another Region. The application is running in warm standby mode and is fronted by an Application Load Balancer (ALB). The current failover process is manual and requires updating a DNS alias record to point to the secondary ALB in another Region.

What should a solutions architect do to automate the failover process?

- A. Enable an ALB health check.
- B. Enable an Amazon Route 53 health check.
- C. Create a CNAME record on Amazon Route 53 pointing to the ALB endpoint.

D. Create conditional forwarding rules on Amazon Route 53 pointing to an internal BIND DNS server

Answer: B

Question #:121

A disaster response team is using drones to collect images of recent storm damage. The response team's laptops lack the storage and compute capacity to transfer the images and process the data. While the team has Amazon EC2 instances for processing and Amazon S3 buckets for storage, network connectivity is intermittent and unreliable. The images need to be processed to evaluate the damage.

What should a solutions architect recommend?

- A. Use AWS Snowball Edge devices to process and store the images
- B. Upload the images to Amazon Simple Queue Service (Amazon SQS) during intermittent connectivity to EC2 instances.
- C. Configure Amazon Kinesis Data Firehose to create multiple delivery streams aimed separately at the S3 buckets for storage and the EC2 instances for processing the images
- D. Use AWS Storage Gateway pre-installed on a hardware appliance to cache the images locally for Amazon S3 to process the images when connectivity becomes available.

Answer: A

Question #:122

A company serves content to its subscribers across the world using an application running on AWS. The application has several Amazon EC2 instances in a private subnet behind an Application Load Balancer (ALB). Due to a recent change in copyright restrictions, the chief information officer (CIO) wants to block access for certain countries.

Which action will meet these requirements?

- A. Modify the ALB security group to deny incoming traffic from blocked countries
- B. Modify the security group for EC2 instances to deny incoming traffic from blocked countries
- C. Use Amazon CloudFront to serve the application and deny access to blocked countries
- D. Use ALB listener rules to return access denied responses to incoming traffic from blocked countries

Answer: C

Question #:123

A company is concerned about the security of its public web application due to recent web attacks. The application uses an Application Load Balancer (ALB). A solutions architect must reduce the risk of DDoS attacks against the application

What should the solutions architect do to meet this requirement?

- A. Add an Amazon Inspector agent to the ALB
- B. Configure Amazon Macie to prevent attacks.
- C. Enable AWS Shield Advanced to prevent attacks.
- D. Configure Amazon GuardDuty to monitor the ALB

Answer: C

Question #:124

A company has a customer relationship management (CRM) application that stores data in an Amazon RDS DB instance that runs Microsoft SQL Server. The company's IT staff has administrative access to the database. The database contains sensitive data. The company wants to ensure that the data is not accessible to the IT staff and that only authorized personnel can view the data.

What should a solutions architect do to secure the data?

- A. Use client-side encryption with an Amazon RDS managed key.
- B. Use client-side encryption with an AWS Key Management Service (AWS KMS) customer managed key.
- C. Use Amazon RDS encryption with an AWS Key Management Service (AWS KMS) default encryption key.
- D. Use Amazon RDS encryption with an AWS Key Management Service (AWS KMS) customer managed key.

Answer: D

Question #:125

A company has a custom application running on an Amazon EC2 instance that

- Reads a large amount of data from Amazon S3
- Performs a multi-stage analysis.

Writes the results to Amazon DynamoDB

The application writes a significant number of large, temporary files during the multi-stage analysis. The process performance depends on the temporary storage performance. What would be the fastest storage option for holding the temporary files?

- A. Multiple Amazon S3 buckets with Transfer Acceleration for storage
- B. Multiple Amazon EBS drives with Provisioned IOPS and EBS optimization
- C. Multiple Amazon EFS volumes using the Network File System version 4.1 (NFSv4.1) protocol
- D. Multiple instance store volumes with software RAID 0.

Answer: A

Question #:126

A company hosts its website on AWS. To address the highly variable demand the company has implemented Amazon EC2 Auto Scaling. Management is concerned that the company is over-provisioning its infrastructure, especially at the front end of the three-tier application. A solutions architect needs to ensure costs are optimized without impacting performance.

What should the solutions architect do to accomplish this?

- A. Use Auto Scaling with Reserved Instances
- B. Use Auto Scaling with a scheduled scaling policy
- C. Use Auto Scaling with the suspend-resume feature.
- D. Use Auto Scaling with a target tracking scaling policy

Answer: D

Question #:127

A company is launching a new application that will be hosted on Amazon EC2 instances. A solutions architect needs to design a solution that does not allow public IPv4 access that originates from the internet. However, the solution must allow the EC2 instances to make outbound IPv4 internet requests.

The initial design proposal shows that the EC2 instances would be located in two private subnets across two Availability Zones. The entire architecture must be highly available.

How should the solutions architect change the architecture to meet these requirements?

- A. Deploy a NAT gateway in public subnets in both Availability Zones. Create and configure one route table for each private subnet.

- B. Deploy an internet gateway in public subnets in both Availability Zones. Create and configure a shared route table for the private subnets.
- C. Deploy a NAT gateway in public subnets in both Availability Zones. Create and configure a shared route table for the private subnets.
- D. Deploy an egress-only internet gateway in public subnets in both Availability Zones. Create and configure one route table for each private subnet.

Answer: C

Question #:128

A company uses a payment processing system that requires messages for a particular payment ID to be received in the same order that they were sent. Otherwise, the payments might be processed incorrectly.

Which actions should a solutions architect take to meet this requirement? (Select TWO.)

- A. Write the messages to an Amazon DynamoDB table with the payment ID as the partition key.
- B. Write the messages to an Amazon Kinesis data stream with the payment ID as the partition key.
- C. Write the messages to an Amazon ElastiCache for Memcached cluster with the payment ID as the key.
- D. Write the messages to an Amazon Simple Queue Service (Amazon SQS) queue. Set the message attribute to use the payment ID.
- E. Write the messages to an Amazon Simple Queue Service (Amazon SQS) FIFO queue. Set the message group to use the payment ID.

Answer: A E

Question #:129

A company is developing an internal application that uses a PostgreSQL database. The company has decided to host the database on Amazon Aurora. The application does not need to be highly available but data must be stored in multiple Availability Zones to maximize durability.

Which database configuration meets these requirements MOST cost-effectively?

- A. An Aurora PostgreSQL DB cluster with a single D8 Instance
- B. An Aurora PostgreSQL DB cluster with a primary DB instance and a read replica
- C. An Aurora PostgreSQL DB cluster with Multi-AZ deployment enabled
- D. An Aurora PostgreSQL global database cluster

Answer: B**Question #:130**

A company has three VPCs named Development, Testing and Production in the us-east-1 Region. The three VPCs need to be connected to an on-premises data center and are designed to be separate to maintain security and prevent any resource sharing. A solutions architect needs to find a scalable and secure solution.

What should the solutions architect recommend?

- A. Create an AWS Direct Connect connection and a VPN connection for each VPC to connect back to the data center.
- B. Create VPC peers from all the VPCs to the Production VPC. Use an AWS Direct Connect connection from the Production VPC back to the data center.
- C. Connect VPN connections from all the VPCs to a VPN in the Production VPC. Use a VPN connection from the Production VPC back to the data center.
- D. Create a new VPC called Network. Within the Network VPC, create an AWS Transit Gateway with an AWS Direct Connect connection back to the data center. Attach all the other VPCs to the Network VPC.

Answer: D**Question #:131**

A company is running a highly sensitive application on Amazon EC2 backed by an Amazon RDS database. Compliance regulations mandate that all personally identifiable information (PII) be encrypted at rest.

Which solution should a solutions architect recommend to meet this requirement with the LEAST amount of changes to the infrastructure?

- A. Deploy AWS Certificate Manager to generate certificates. Use the certificates to encrypt the database volume.
- B. Deploy AWS CloudHSM, generate encryption keys, and use the customer master key (CMK) to encrypt database volumes.
- C. Configure SSL encryption using AWS Key Management Service customer master keys (AWS KMS CMKs) to encrypt database volumes.
- D. Configure Amazon Elastic Block Store (Amazon EBS) encryption and Amazon RDS encryption with AWS Key Management Service (AWS KMS) keys to encrypt instance and database volumes.

Answer: D**Question #:132**

A computer is reviewing a recent migration of a three-tier application to a VPC. The security team discover that the principle of least privilege is not being applied to Amazon EC2 security group ingress and egress rules between the application tiers.

What should a solution architect do to connect issue?

- A. Create security group rules using the instance ID as the source destination.
- B. Create security group rules using the security ID as the source or destination.
- C. Create security group rules using the VPC CIDR blocks as the source or destination
- D. Create security group rules using the subnet CIDR blocks as the source or destination

Answer: A

Explanation

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/security-group-rules.html>

Question #:133

A solutions architect is creating an application that will handle batch processing of large amounts of data. The input data will be held in Amazon S3 and the output data will be stored in a different S3 bucket. For processing, the application will transfer the data over the network between multiple Amazon EC2 instances.

What should the solutions architect do to reduce the overall data transfer costs?

- A. Place all the EC2 instances in an Auto Scaling group
- B. Place all the EC2 instances in the same AWS Region
- C. Place all the EC2 instances in the same Availability Zone
- D. Place all the EC2 instances in private subnets in multiple Availability Zones

Answer: C

Question #:134

A company has an application that collects data from IoT sensors on automobiles. The data is streamed and stored in Amazon S3 through Amazon Kinesis Data Firehose. The data produces trillions of S3 objects each year. Each morning, the company uses the data from the previous 30 days to retrain a suite of machine learning (ML) models.

Four times each year, the company uses the data from the previous 12 months to perform analysis and train other ML models. The data must be available with minimal delay for up to 1 year. After 1 year, the data must be retained for archival purposes.

Which storage solution meets these requirements MOST cost-effectively?

- A. Use the S3 Intelligent-Tiering storage class. Create an S3 Lifecycle policy to transition objects to S3 Glacier Deep Archive after 1 year
- B. Use the S3 Intelligent-Tiering storage class. Configure S3 Intelligent-Tiering to automatically move objects to S3 Glacier Deep Archive after 1 year.
- C. Use the S3 Standard-Infrequent Access (S3 Standard-IA) storage class. Create an S3 Lifecycle policy to transition objects to S3 Glacier Deep Archive after 1 year.
- D. Use the S3 Standard storage class. Create an S3 Lifecycle policy to transition objects to S3 Standard-Infrequent Access (S3 Standard-IA) after 30 days, and then to S3 Glacier Deep Archive after 1 year.

Answer: C

Question #:135

A company hosts an application on AWS. The application interacts with an Amazon DynamoDB table that has 10 read capacity units (RCUs). Data from Amazon CloudWatch alarms shows that throttling is occurring on read requests to the DynamoDB table. The company needs to prevent this issue from happening in the future as the application continues to grow.

What should a solutions architect recommend to meet these requirements?

- A. Add an Elastic Load Balancer in front of the DynamoDB table.
- B. Change the RCUs for the DynamoDB table to 20.
- C. Provision 20 write capacity units (WCUs) for the DynamoDB table to offset the throttling on read requests.
- D. Enable auto scaling for the DynamoDB table

Answer: D

Question #:136

A company hosts its static website content from an Amazon S3 bucket in the us-east-1 Region. Content is made available through an Amazon CloudFront origin pointing to that bucket. Cross-Region replication is set up to create a second copy of the bucket in the ap-southeast-1 Region. Management wants a solution that provides greater availability for the website.

Which combination of actions should a solutions architect take to increase availability? (Select TWO.)

- A. Add both buckets to the CloudFront origin

- B. Configure failover routing in Amazon Route 53
- C. Create a record in Amazon Route 53 pointing to the replica bucket
- D. Create an additional CloudFront origin pointing to the ap-southeast-1 bucket
- E. Set up a CloudFront origin group with the us-east-1 bucket as the primary and the ap-southeast-1 bucket as the secondary

Answer: B E

Question #:137

A company allows its developers to attach existing IAM policies to existing IAM roles to enable faster experimentation and agility. However, the security operations team is concerned that the developers could attach the existing administrator policy, which would allow the developers to circumvent any other security policies.

How should a solution architect address this issue?

- A. Create an Amazon SNS topic to send an alert every time a developer create a new policy.
- B. Use service control policies to disable IAM across all account in the organizational unit.
- C. Prevent the developers from attaching any policies and duties to the security option team.
- D. Set an IAM permission boundary on the developer IAM role that explicitly dries of attaching the administrator policy

Answer: D

Question #:138

A company is using AWS to design a web application that will process insurance quotes Users will request quotes from the application Quotes must be separated by quote type, must be responded to within 24 hours, and must not get lost The solution must maximize operational efficiency and must minimize maintenance. Which solution meets these requirements?

- A. Create multiple Amazon Kinesis data streams based on the quote type Configure the web application to send messages to the proper data stream Configure each backend group of application servers to use the Kinesis Client Library (KCL) to pool messages from its own data stream
- B. Create an AWS Lambda function and an Amazon Simple Notification Service (Amazon SNS) topic for each quote type Subscribe the Lambda function to its associated SNS topic Configure the application to publish requests tot quotes to the appropriate SNS topic
- C. Create a single Amazon Simple Notification Service (Amazon SNS) topic Subscribe Amazon Simple Queue Service (Amazon SQS) queues to the SNS topic Configure SNS message filtering to publish messages to the proper SQS queue based on the quote type Configure each backend application server to

use its own SQS queue

- D. Create multiple Amazon Kinesis Data Firehose delivery streams based on the quote type to deliver data streams to an Amazon Elasticsearch Service (Amazon ES) cluster. Configure the application to send messages to the proper delivery stream. Configure each backend group of application servers to search for the messages from Amazon ES and process them accordingly.

Answer: C

Question #:139

A company has a website running on Amazon EC2 Instances across two Availability Zones. The company is expecting spikes in traffic on specific holidays and wants to provide a consistent user experience.

How can a solutions architect meet this requirement?

- A. Use step scaling
- B. Use simple scaling
- C. Use lifecycle hooks
- D. Use scheduled scaling

Answer: D

Question #:140

A company wants to build an online marketplace application on AWS as a set of loosely coupled microservices. For this application, when a customer submits a new order, two microservices should handle the event simultaneously. The Email microservice will send a confirmation email and the OrderProcessing microservice will start the order delivery process. If a customer cancels an order, the OrderCancellation and Email microservices should handle the event simultaneously.

A solutions architect wants to use Amazon Simple Queue Service (Amazon SQS) and Amazon Simple Notification Service (Amazon SNS) to design the messaging between the microservices.

How should the solutions architect design the solution?

- A. Create a single SQS queue and publish order events to it. The Email, OrderProcessing, and OrderCancellation microservices can then consume messages off the queue.
- B. Create three SNS topics for each microservice. Publish order events to the three topics. Subscribe each of the Email, OrderProcessing, and OrderCancellation microservices to its own topic.
- C. Create an SNS topic and publish order events to it. Create three SQS queues for the Email, OrderProcessing, and OrderCancellation microservices. Subscribe all SQS queues to the SNS topic with message filtering.

- D. Create two SQS queues and publish order events to both queues simultaneously One queue is for the Email and OrderProcessing microservices The second queue is for the Email and Order Cancellation microservices

Answer: C

Question #:141

A company runs a multi-tier web application that hosts news content The application runs on Amazon EC2 instances behind an Application Load Balancer. The instances run in an EC2 Auto Scaling group across multiple Availability Zones and use an Amazon Aurora database A solutions architect needs to make the application more resilient to periodic increases in request rates.

Which architecture should the solutions architect implement? (Select TWO.)

- A. Add AWS Shield
- B. Add Aurora Replicas.
- C. Add AWS Direct Connect
- D. Add AWS Global Accelerator.
- E. Add an Amazon CloudFront distribution in front of the Application Load Balancer

Answer: B E

Question #:142

A company has established a new AWS account. The account is newly provisioned and no changes have been made to the default settings The company is concerned about the security of the AWS account root user

What should be done to secure the root user?

- A. Create IAM users for daily administrative tasks Disable the root user
- B. Create IAM users for daily administrative tasks Enable multi-factor authentication on the root user
- C. Generate an access key for the root user Use the access key for daily administration tasks instead of the AWS Management Console
- D. Provide the root user credentials to the most senior solutions architect Have the solutions architect use the root user for daily administration tasks

Answer: B

Question #:143

A company has an application that calls AWS Lambda functions. A recent code review found database credentials stored in the source code. The database credentials needs to be removed from the Lambda source code. The credentials must then be securely stored and rotated on a on-going basis to meet security policy requirements.

What should a solutions architect recommend meet these requirements?

- A. Store the password in AWS CloudHSM. Associate the Lambda function with a role that can review the password from CloudHSM given key ID.
- B. Store the password in AWS Secrets Manager . A associate the Lambda function with a role that can retrieve the password from secrets Manager given its secret ID.
- C. Move the database password to an environment variable associate the Lambda function Retrieve the password from the environment variable upon execution.
- D. Store the password in AWS Key Management Service (AWS KMS). Associate the Lambda function with a role that can retrieve the password from AWS KMS given its key ID.

Answer: B

Question #:144

A company has a large Microsoft SharePoint deployment running on-premises that requires Microsoft Windows shared file storage The company wants to migrate this workload to the AWS Cloud and is considering various storage options The storage solution must be highly available and integrated with Active Directory for access control

Which solution will satisfy these requirements?

- A. Configure Amazon EFS storage and set the Active Directory domain for authentication
- B. Create an SMB Me share on an AWS Storage Gateway tile gateway in two Availability Zones
- C. Create an Amazon S3 bucket and configure Microsoft Windows Server to mount it as a volume
- D. Create an Amazon FSx for Windows File Server file system on AWS and set the Active Directory domain for authentication

Answer: D

Question #:145

A company's website is used to sell products to the public The site runs on Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer (ALB) There is also an Amazon CloudFront distribution and AWS WAF Is being used to protect against SQL injection attacks The ALB is the origin for the CloudFront distribution A recent review of security logs revealed an external malicious IP that needs to be blocked from accessing the website

What should a solutions architect do to protect the application?

- A. Modify the network ACL on the CloudFront distribution to add a deny rule for the malicious IP address
- B. Modify the configuration of AWS WAF to add an IP match condition to block the malicious IP address
- C. Modify the network ACL for the EC2 instances in the target groups behind the ALB to deny the malicious IP address
- D. Modify the security groups for the EC2 instances in the target groups behind the ALB to deny the malicious IP address

Answer: B

Question #:146

A solutions architect is deploying a distributed database on multiple Amazon EC2 instances. The database stores all data on multiple instances so it can withstand the loss of an instance. The database requires block storage with latency and Throughput to support several million transactions per second per server

Which storage solution should the solutions architect use?

- A. Amazon EBS
- B. Amazon EC2 instance store
- C. Amazon EFS
- D. Amazon S3

Answer: B

Question #:147

A company's website runs on Amazon EC2 instances behind an Application Load Balancer (ALB). The website has a mix of dynamic and static content. Users around the globe are reporting that the website is slow

Which set of actions will improve website performance for users worldwide?

- A. Create an Amazon CloudFront distribution and configure the ALB as an origin. Then update the Amazon Route 53 record to point to the CloudFront distribution
- B. Create a latency-based Amazon Route 53 record for the ALB. Then launch new EC2 instances with larger instance sizes and register the instances with the ALB
- C. Launch new EC2 instances hosting the same web application in different Regions closer to the users. Then register the instances with the same ALB using cross-Region VPC peering.
- D. Host the website in an Amazon S3 bucket in the Regions closest to the users and delete the ALB and

EC2 instances. Then update an Amazon Route 53 record to point to the S3 buckets.

Answer: A

Question #:148

A company needs to provide its employees with secure access to confidential and sensitive files. The company wants to ensure that the files can be accessed only by authorized users. The files must be downloaded securely to the employees' devices.

The files are stored in an on-premises Windows file server. However, due to an increase in remote usage, the file server is running out of capacity.

Which solution will meet these requirements?

- A. Migrate the file server to an Amazon EC2 instance in a public subnet. Configure the security group to limit inbound traffic to the employees' IP addresses.
- B. Migrate the files to an Amazon FSx for Windows File Server file system. Integrate the Amazon FSx file system with the on-premises Active Directory. Configure AWS Client VPN.
- C. Migrate the files to Amazon S3, and create a private VPC endpoint. Create a signed URL to allow download.
- D. Migrate the files to Amazon S3, and create a public VPC endpoint. Allow employees to sign on with AWS Single Sign-On.

Answer: D

Question #:149

A solutions architect is designing the storage architecture for a new web application used for storing and viewing engineering drawings. All application components will be deployed on the AWS infrastructure.

The application design must support caching to minimize the amount of time that users wait for the engineering drawings to load. The application must be able to store petabytes of data.

Which combination of storage and caching should the solutions architect use?

- A. Amazon S3 with Amazon CloudFront
- B. Amazon S3 Glacier with Amazon ElastiCache
- C. Amazon Elastic Block Store (Amazon EBS) volumes with Amazon CloudFront
- D. AWS Storage Gateway with Amazon ElastiCache

Answer: A

Question #:150

A company is creating an architecture for a mobile app that requires minimal latency for its users. The company's architecture consists of Amazon EC2 instances behind an Application Load Balancer running in an Auto Scaling group. The EC2 instances connect to Amazon RDS. Application beta testing showed there was a slowdown when reading the data. However, the metrics indicate that the EC2 instances do not cross any CPU utilization thresholds.

How can this issue be addressed?

- A. Reduce the threshold for CPU utilization in the Auto Scaling group
- B. Replace the Application Load Balancer with a Network Load Balancer.
- C. Add read replicas for the RDS instances and direct read traffic to the replica
- D. Add Multi-AZ support to the RDS instances and direct read traffic to the new EC2 instance

Answer: C

Question #:151

A security team needs to enforce the rotation of all IAM users' access keys every 90 days. If an access key is found to be older, the key must be made inactive and removed. A solutions architect must create a solution that will check for and remediate any keys older than 90 days.

Which solution meets these requirements with the LEAST operational effort?

- A. Create an AWS Config rule to check for the key age. Configure the AWS Config rule to run an AWS Batch job to remove the key.
- B. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to check for the key age. Configure the rule to run an AWS Batch job to remove the key.
- C. Create an AWS Config rule to check for the key age. Define an Amazon EventBridge (Amazon CloudWatch Events) rule to schedule an AWS Lambda function to remove the key.
- D. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to check for the key age. Define an EventBridge (CloudWatch Events) rule to run an AWS Batch job to remove the key.

Answer: C

Question #:152

A company is running an application on Amazon EC2 instances. Traffic to the workload increases.

substantially during business hours and decreases afterward. The CPU utilization of an EC2 instance is a strong indicator of end-user demand on the application. The company has configured an Auto Scaling group to have a minimum group size of 2 EC2 instances and a maximum group size of 10 EC2 instances.

The company is concerned that the current scaling policy that is associated with the Auto Scaling group might not be correct. The company must avoid over-provisioning EC2 instances and incurring unnecessary costs.

What should a solutions architect recommend to meet these requirements?

- A. Configure Amazon EC2 Auto Scaling to use a scheduled scaling plan and launch an additional 8 EC2 instances during business hours.
- B. Configure AWS Auto Scaling to use a scaling plan that enables predictive scaling. Configure predictive scaling with a scaling mode of forecast and scale, and to enforce the maximum capacity setting during scaling.
- C. Configure a step scaling policy to add 4 EC2 instances at 50% CPU utilization and add another 4 EC2 instances at 90% CPU utilization. Configure scale-in policies to perform the reverse and remove EC2 instances based on the two values.
- D. Configure AWS Auto Scaling to have a desired capacity of 5 EC2 instances, and disable any existing scaling policies. Monitor the CPU utilization metric for 1 week. Then create dynamic scaling policies that are based on the observed values.

Answer: B

Question #:153

A company has created a multi-tier application for its ecommerce website. The website uses an Application Load Balancer that resides in the public subnets, a web tier in the public subnets, and a MySQL cluster hosted on Amazon EC2 instances in the private subnets. The MySQL database needs to retrieve product catalog and pricing information that is hosted on the internet by a third-party provider. A solutions architect must devise a strategy that maximizes security without increasing operational overhead.

What should the solutions architect do to meet these requirements?

- A. Deploy a NAT instance in the VPC. Route all the internet-based traffic through the NAT instance.
- B. Deploy a NAT gateway in the public subnets. Modify the private subnet route table to direct all internet-bound traffic to the NAT gateway.
- C. Configure an internet gateway and attach it to the VPC. Modify the private subnet route table to direct internet-bound traffic to the internet gateway.
- D. Configure a virtual private gateway and attach it to the VPC. Modify the private subnet route table to direct internet-bound traffic to the virtual private gateway.

Answer: B

Question #:154

A company needs to connect its on-premises data center network to a new VPC. The data center network has a 100 Mbps symmetrical internet connection. An application that is running on premises will transfer multiple gigabytes of data each day. The application will use an Amazon Kinesis Data Firehose delivery stream for processing

What should a solutions architect recommend for maximum performance?

- A. Create a VPC peering connection between the on-premises network and the VPC Configure routing for the on-premises network to use the VPC peering connection.
- B. Procure an AWS Snowball Edge Storage Optimized device. After several days' worth of data has accumulated, copy the data to the device and ship the device to AWS for expedited transfer to Kinesis Data Firehose Repeat as needed
- C. Create an AWS Site-to-Site VPN connection between the on-premises network and the VPC Configure BGP routing between the customer gateway and the virtual private gateway. Use the VPN connection to send the data from on premises to Kinesis Data Firehose.
- D. Use AWS PrivateLink to create an interface VPC endpoint for Kinesis Data Firehose in the VPC. Set up a 1 Gbps AWS Direct Connect connection between the on-premises network and AWS Use the PrivateLink endpoint to send the data from on premises to Kinesis Data Firehose.

Answer: D

Question #:155

A medical research lab produces data that is related to a new study. The lab wants to make the data available with minimum latency to clinics across the country for their on-premises file-based applications. The data files are stored in an Amazon S3 bucket that has read-only permissions for each clinic.

What should a solutions architect recommend to meet these requirements?

- A. Deploy an AWS Storage Gateway file gateway as a virtual machine (VM) on premises at each clinic.
- B. Migrate the files to each clinic's on-premises applications by using AWS DataSync for processing
- C. Deploy an AWS Storage Gateway volume gateway as a virtual machine (VM) on premises at each clinic.
- D. Attach an Amazon Elastic File System (Amazon EFS) file system to each clinic's on-premises servers

Answer: A

Question #:156

A company wants to run an in-memory database for a latency-sensitive application that runs on Amazon EC2 instances. The application processes more than 100,000 transactions each minute and requires high network throughput. A solutions architect needs to provide a cost-effective network design that minimizes data transfer charges.

Which solution meets these requirements?

- A. Launch all EC2 instances in the same Availability Zone within the same AWS Region. Specify a placement group with cluster strategy when launching EC2 instances.
- B. Launch all EC2 instances in different Availability Zones within the same AWS Region. Specify a placement group with partition strategy when launching EC2 instances.
- C. Deploy an Auto Scaling group to launch EC2 instances in different Availability Zones based on a network utilization target.
- D. Deploy an Auto Scaling group with a step scaling policy to launch EC2 instances in different Availability Zones.

Answer: A

Question #:157

A solutions architect is designing a multi-Region disaster recovery solution (or an application that will provide public API access). The application will use Amazon EC2 instances with a userdata script to load application code and an Amazon RDS for MySQL database. The Recovery Time Objective (RTO) is 3 hours and the Recovery Point Objective (RPO) is 24 hours.

Which architecture would meet these requirements at the LOWEST cost/?

- A. Use an Application Load Balancer for Region failover. Deploy new EC2 instances with the userdata script. Deploy separate RDS instances in each Region.
- B. Use Amazon Route 53 for Region failover. Deploy new EC2 instances with the userdata script. Create a read replica of the RDS instance in a backup Region.
- C. Use Amazon API Gateway for the public APIs and Region failover. Deploy new EC2 instances with the userdata script. Create a MySQL read replica of the RDS instance in a backup Region.
- D. Use Amazon Route 53 for Region failover. Deploy new EC2 instances with the userdata script for APIs, and create a snapshot of the RDS instance daily for a backup. Replicate the snapshot to a backup Region.

Answer: C

Question #:158

An application running on AWS uses an Amazon Aurora Multi-AZ deployment for its database. When evaluating performance metrics, a solutions architect discovered that the database reads are causing high I/O and adding latency to the write requests against the database.

What should the solutions architect do to separate the read requests from the write requests?

- A. Enable read-through caching on the Amazon Aurora database.
- B. Update the application to read from the Multi-AZ standby instance.
- C. Create a read replica and modify the application to use the appropriate endpoint.
- D. Create a second Amazon Aurora database and link it to the primary database as a read replica.

Answer: C

Question #:159

A company receives data from millions of users totalling about 1 TB each day. The company provides its users with usage reports going back 12 months. All usage data must be stored for at least 5 years to comply with regulatory and auditing requirements.

Which storage solution is MOST cost-effective?

- A. Store the data in Amazon S3 Standard. Set a lifecycle rule to transition the data to S3 Glacier Deep Archive after 1 year. Set a lifecycle rule to delete the data after 5 years.
- B. Store the data in Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA). Set a lifecycle rule to transition the data to S3 Glacier after 1 year. Set the lifecycle rule to delete the data after 5 years.
- C. Store the data in Amazon S3 Standard-Infrequent Access (S3 Standard-IA) after 1 year. Set a lifecycle rule to delete the data after 5 years.
- D. Store the data in Amazon S3 Standard. Set a lifecycle rule to transition the data to S3 One Zone-Infrequent Access (S3 One Zone-IA) after 1 year. Set a lifecycle rule to delete the data after 5 years.

Answer: A

Question #:160

A solutions architect must design a solution that uses Amazon CloudFront with an Amazon S3 origin to store a static website. The company's security policy requires that all website traffic be inspected by AWS WAF.

How should the solutions architect comply with these requirements?

- A. Configure an S3 bucket policy to accept requests coming from the AWS WAF Amazon Resource Name (ARN) only.

- B. Configure Amazon CloudFront to forward all incoming requests to AWS WAF before requesting content from the S3 origin.
- C. Configure a security group that allows Amazon CloudFront IP addresses to access Amazon S3 only. Associate AWS WAF to CloudFront.
- D. Configure Amazon CloudFront and Amazon S3 to use an origin access identity (OAI) to restrict access to the S3 bucket. Enable AWS WAF on the distribution.

Answer: D

Question #:161

A solutions architect is designing the architecture for a new web application. The application will run on AWS Fargate containers with an Application Load Balancer (ALB) and an Amazon Aurora PostgreSQL database. The web application will perform primarily read queries against the database.

What should the solutions architect do to ensure that the website can scale with increasing traffic? (Select TWO.)

- A. Enable auto scaling on the ALB to scale the load balancer horizontally.
- B. Configure Aurora Auto Scaling to adjust the number of Aurora Replicas in the Aurora cluster dynamically.
- C. Enable cross-zone load balancing on the ALB to distribute the load evenly across containers in all Availability Zones.
- D. Configure an Amazon Elastic Container Service (Amazon ECS) cluster in each Availability Zone to distribute the load across multiple Availability Zones.
- E. Configure Amazon Elastic Container Service (Amazon ECS) Service Auto Scaling with a target tracking scaling policy that is based on CPU utilization.

Answer: A B

Question #:162

A solutions architect needs to design a resilient solution for Windows users' home directories. The solution must provide fault tolerance, file-level backup and recovery, and access control, based upon the company's Active Directory.

Which storage solution meets these requirements?

- A. Configure Amazon S3 to store the users' home directories. Join Amazon S3 to Active Directory

- B. Configure a Multi-AZ file system with Amazon FSx for Windows File Server Join Amazon FSx to Active Directory
- C. Configure Amazon Elastic File System (Amazon EFS) for the users home directories. Configure AWS Single Sign-On with Active Directory.
- D. Configure Amazon Elastic Block Store (Amazon EBS) to store the users home directories Configure AWS Single Sign-On with Active Directory

Answer: B

Question #:163

A company is hosting an application in its own data center The application uses Amazon S3 for data storage The application transfers several hundred terabytes of data every month to and from Amazon S3 The company needs to minimize the cost of this data transfer

Which solution meets this requirement?

- A. Establish an AWS Direct Connect connection between the AWS Region in use and the company's data center Route traffic to Amazon S3 over the Direct Connect connection
- B. Establish an AWS Site-to-Site VPN connection between the company's data center and a VPC in the AWS Region in use. Create a VPC endpoint for Amazon S3 in the VPC. Route traffic to Amazon S3 over the VPN connection to the S3 endpoint.
- C. Create an AWS Storage Gateway file gateway Deploy the software appliance in the company's data center Configure the application to use the file gateway to store and retrieve files
- D. Create an FTPS server by using AWS Transfer Family. Configure the application to use the FTPS server to store and retrieve files

Answer: C

Question #:164

A solutions architect needs to design a managed storage solution for a company's application that includes high-performance machine learning This application runs on AWS Fargate, and the connected storage needs to have concurrent access to files and deliver high performance

Which storage option should the solutions architect recommend?

- A. Create an Amazon S3 bucket for the application and establish an IAM role for Fargate to communicate with Amazon S3
- B. Create an Amazon FSx for Lustre file share and establish an IAM role that allows Fargate to communicate with FSx for Lustre

- C. Create an Amazon Elastic File System (Amazon EFS) file share and establish an IAM role that allows Fargate to communicate with Amazon EFS.
- D. Create an Amazon Elastic Block Store (Amazon EBS) volume for the application and establish an IAM role that allows Fargate to communicate with Amazon EBS

Answer: B

Question #:165

A company has two VPCs that are located in the us-west-2 Region within the same AWS account. The company needs to allow network traffic between these VPCs. Approximately 500 GB of data transfer will occur between the VPCs each month.

What is the MOST cost-effective solution to connect these VPCs'?

- A. Implement AWS Transit Gateway to connect the VPCs Update the route tables of each VPC to use the transit gateway for inter-VPC communication
- B. Implement an AWS Site-to-Site VPN tunnel between the VPCs. Update the route tables of each VPC to use the VPN tunnel for inter-VPC communication
- C. Set up a VPC peering connection between the VPCs. Update the route tables of each VPC to use the VPC peering connection for inter-VPC communication.
- D. Set up a 1 GB AWS Direct Connect connection between the VPCs. Update the route tables of each VPC to use the Direct Connect connection for inter-VPC communication.

Answer: C

Question #:166

An administrator of a large company wants to monitor for and prevent any cryptocurrency-related attacks on the company's AWS accounts Which AWS service can the administrator use to protect the company against attacks?

- A. Amazon Cognito
- B. Amazon GuardDuty
- C. Amazon Inspector
- D. Amazon Macie

Answer: B

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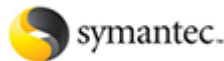
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